

**“YOUNG PEOPLES’ PERCEPTIONS OF SMOKING AND
PERSONAL-SOCIAL FACTORS THAT INFLUENCE THEIR
BEHAVIOUR”**

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ABSTRACT

This thesis seeks to identify the psychosocial factors that influence adolescent smoking and to make suggestions for a smoking prevention/intervention programme. It is of particular interest to explore adolescent smoking in the Greek setting, where both teachers and pupils smoke on the school premises and smoking is socially acceptable. The participants are 672 pupils who attend six Greek schools – 351 aged 12-13 years old (mean age=12.6 years) and 321 aged 15-16 years old (mean age=15.8 years). Self-report, anonymous and confidential questionnaires are completed at the beginning and at the end of the academic year (7 months apart). The participants are grouped into four categories according to their smoking behaviour and 150 of them are randomly selected and interviewed. The interviews are semi-structured and employed to validate the self-reports and to provide more in-depth information on certain issues. Information on the situation in Greek schools is collected from 120 teachers who are interviewed at the beginning of the academic year. There is a significant increase in the smoking prevalence of both age groups at phase two. The patterns of the changes in smoking support the theory of stages. Psychosocial factors, such as school, teachers, parents, siblings and friends exert different levels of influence on the adolescents, who are not merely passive recipients. Personality factors are equally important determinants of the adolescents' decision to experiment with cigarettes and take up the habit of smoking or not. Adolescents foster many misconceptions about cigarettes, which may differ according to their gender. Their knowledge tends to mirror a reproduction of statements they do not fully understand. Intention to smoke in the future seems to be a fairly accurate predictor of taking up smoking eventually. Suggestions for smoking

prevention/intervention programmes and a model of layers of influence on adolescent smoking are discussed.

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1. INTRODUCTION

1.1. Smoking: prevalence and effects

«Only one can kill», «Smoking causes death». These are some of the health warnings that people encounter when they see cigarette advertisements, or when they purchase a packet of cigarettes. Almost everybody has heard of the hazardous consequences of tobacco smoking, which are made available to the public through articles, leaflets and debates or talk shows on TV. Heart attacks, strokes, cancer of the larynx, mouth, pancreas, bladder, lungs and throat, leukaemia, emphysema and chronic bronchitis are among the dangers associated with cigarette smoking. Because nicotine is a stimulant, it increases the heart rate and constricts the blood vessels, thereby limiting the flow of oxygen to all parts of the body. Women who smoke and take birth-control pills run a much higher risk than non-smokers of cancer and strokes. Pregnant smokers also run a higher risk than non-smokers of miscarriage, stillbirths, premature births and babies who have a greater number of illness during their first year of life. Nicotine also dries the skin, exacerbating wrinkles and creating a toughened, leathery look. It yellows the teeth, diminishes the sensitivity of the taste buds and fouls the breath and it can even cause deafness (Nielsen, 1987).

The list of the negative effects that cigarette smoking has on health is endless, just as is the list of people who die every year as a result of smoking. Nearly 110,700 deaths were caused by smoking in the UK (Health Education Authority, 1992) in 1998 (17% of all deaths in those 35 years and older). Statistics in the

UK (Health Education Authority, 1991) show that on average 115,000 people (1 out of every 8 deceased) die every year from smoking-related diseases. In Australia, in 1989, 19,500 people died from diseases caused by or related to smoking (Alchin and Lee, 1995). Every year 360,000 people in the United States (Lerner and Spanier, 1980) die because of tobacco use. According to even more recent statistics (1999) from the World Health Organisation, 500,000 people in Europe and 3,500,000 world-wide loose their life every year due to tobacco-related diseases. This means that 10,000 people die every day. Half of these people are aged between 35 and 69 years old. If the prevalence of smoking is not decreased by the year 2020, smoking will kill 10,000,000 people yearly – causing more deaths than AIDS, tuberculosis, suicide attempts, perinatal mortality and car accidents put together. At this point it should be added that the ill effects of nicotine can affect non-smokers who are exposed to smoke-filled air (Nielsen, 1987). Passive smokers have a similar sort of lung damage to that of smokers, although in a much milder form (Health Education Authority, 1991). So, a non-estimated number of passive smokers who die every year must be added to this ‘black’ list.

Despite these international statistics indicative of the irreversible harm caused by cigarettes, a lot of people continue to smoke. Dawley, Fleischer and Dawley (1985) report that 37% of men and 30% of women smoke in America. According to the World Health Organisation (1999) there has been an increase in the number of cigarettes smoked in comparison to 1995. In the UK, for example, smokers smoke 4.12 cigarettes per day (1999), whereas they used to smoke 3.72 (1995). In Ireland people smoke 5.14 cigarettes per day (1999), whereas they

used to smoke 4.08 (1995). The most alarming fact is that the number of people who initiate experimentation with smoking remains the same, despite the campaigns carried out by the ministries of health and antismoking groups in many countries.

Evidence suggests (Elder and Stern, 1986) that most smokers take up smoking during adolescence (between scholastic years seven and thirteen). According to the Health Education Authority (1992), by the age of 19 the transformation from teenage to adult smoking patterns and behaviour is complete. Children today start smoking as early as the age of 12 and 90% of smokers start before the age of 18. McMiller and Plant (1996) report that 36% of 7,722 British pupils aged 15 and 16 have smoked cigarettes in the past 30 days. In Canada there are 500,000 smokers between 13 and 19, approximately 20% of the adolescent population (van Roosmalen and McDaniel, 1992). The same percentage is reported also by Swadi (1988) and Muss (1979) who state that one in five adolescents (20%) smokes cigarettes regularly. In the UK alone, 450 adolescents on average start smoking daily. In the USA 3,000 teenagers take up smoking every day (Hopkins-Tanne, 1994). By the age of 11 years one third of children and by the age of 16 years two thirds of children have experimented with smoking (Royal College of Physicians, 1992). Although these studies are conducted in different years, the prevalence of smoking for adolescents remains relatively constant. The high prevalence of regular smoking in young people and the lack of any significant decline in the last decade are cause for concern. It is quite reassuring, that although a lot of adolescents experiment with smoking, most of them do not take up a smoking habit. Penny and Robinson (1986) report that only about a quarter

of all the British teenagers who participate in their study smoke regularly at 16 years old.

The experimentation and particularly the take up of smoking by adolescents is alarming from a medical point of view as well. It is found that the earlier in life an individual starts to smoke, the more cigarettes he or she is likely to consume as an adult and the higher his or her expected mortality rate from smoking related disorders is. For example, someone who starts smoking before the age of 15 is five times more likely to die from cigarette-related diseases than someone who starts smoking after the age of 25 (Mosbach and Leventhal, 1988). Phillips, Wannamethee, Walker, Thomson and Smith (1996) conducted a study of life expectancy in men who have never smoked and those who smoked continuously. The study estimates that for men aged 20-40, only approximately 42% of lifelong smokers alive at the age of 20 will be alive at 73, compared with 78% of lifelong non-smokers. There is even a debate regarding whether the smokers who quit have a chance of improving their health. Gottlieb (1999) mentions a study that looks at the impact of stopping smoking on death rates in a group of 51,343 men and 66,751 women in 1959 which was followed for 38 years. The main finding is that stopping smoking does not translate quickly or directly into reduced rates of death from lung cancer. Peto (1994), though, argues that those who stop smoking before they reach middle age subsequently avoid almost all the excess risk that they would otherwise have. Even those who stop smoking in middle age are at a substantially less risk than those who continue to smoke.

Smoking is associated with many road and domestic accidents, which sometimes leads to adolescent deaths. The most common one is accidentally setting themselves and/or surroundings on fire. Figures offered by insurance companies show that a non-smoker's chances of avoiding a major accident are about five times greater than that of a smoker (although there may be other factors contributing to this). Stevens-Long and Cobb (1983) cite characteristically that: "A smoker may be looking for the car ashtray when the man in front slams on his brakes or rummaging in the glove compartment for a match instead of watching the road". Dalli (1996) pointed out that cigarette smoking fosters serious long-term effects such as bullying and crime to pay for cigarettes. There is also some evidence that smoking can be a 'gateway' into illegal drug misuse.

Cognitive and social factors motivate and reinforce an adolescent to experiment with risk-taking behaviours, such as substance abuse. These psychological factors are embedded with teenagers' development and are important because they are able to explain much of the risk-taking behaviour that characterises some adolescent development patterns. Substance abuse - and especially in its onset - is predominantly an adolescent phenomenon, which takes place within the context of major physical and psychological changes. Although risk-taking and health compromising behaviour are not just confined to adolescence, the onset of many behavioural patterns that occur in the teenage years can, in some cases, be used to predict the progression to further problematic substance abuse and greater risk-taking. Whatever the behaviour - or substance - similar developmental changes are occurring that can account for the motivation and

maintenance of these behaviours, which have important implications for health education (Scriven and Stevenson, 1998).

1.1.1. Smoking in Greece

At this point, it would be useful to describe the situation in Greece, where the study has been conducted, to assist the reader with the interpretation of the findings and their implications. Greece is a country that produces and exports tobacco, which is a main income source for many families (400,000 people). According to the World Bank, Human Development Department (Tobacco Alert, 1997), Greece's earnings from tobacco exports in 1993 came to a total of \$388,891 and Greece was in the 7th position. "Export earnings exceed 10% of total export earnings in 14 countries, all but one (namely Greece) being a developing country or a formerly socialist country of Central or Eastern Europe". Additionally, the Greek Government obtains 7.7% of its income from the tax on tobacco products. In 1995, Greek smokers contributed approximately £1,000,000,000 to the state economy in the form of a special tax and V.A.T. (Rafia, 1998).

Cigarettes are widely advertised in Greece. There are large billboards in the streets and advertisements in magazines. In 1998 the Ministry of Health of the European Community decided to gradually enforce a directive that suggests banning all forms of advertisement of tobacco products. The Minister of Health agreed, but the majority of Greek politicians from all parties were opposed. They advocated that it constitutes a violation of the right of freedom of speech and of

the right to consumer information. The National Economy will suffer a severe loss, since the Government earns a substantial amount of money from tobacco export and the tax paid on each packet of cigarettes. Moreover, unemployment of Greeks involved in the tobacco industry will aggravate the financial loss. So, the situation is very tense and politicians along with leaders of the tobacco industry have opposed the Minister of Health in an effort to prevent the enforcement of the directive from the European Community (Rafia, 1998).

Smoking in Greece is permitted almost everywhere. People smoke on school premises, in public places (e.g. the bank) and even in hospitals. Recently, the staff of one hospital tried to prevent patients, visitors and staff from smoking on the premises of the hospital. The news reached the press and many people expressed their opposition to this initiative. According to an article published in a newspaper (News, 1998) Greece is one of the few developed countries where smoking is allowed in almost every public place. Minors are allowed to buy cigarettes, which are relatively cheap. According to data from the 'Non-smokers' Rights Association", which is published in Tobacco Alert (1997), the average price of 20 cigarettes in US\$ in Greece in 1995 was 1.99. The equivalent price for Ireland was 4.33 and for the United Kingdom 4.28. The WHO (1996) estimates that a Greek smoker needs to work 16 minutes at the average industrial wage to buy a pack of 20 cigarettes, while the British smoker has to work 23 minutes and the Irish 21 minutes.

A combination of all these factors has led to Greece holding a 'prominent' place in the list of the countries with the highest prevalence of smoking. Also, there has

been a dramatic increase since 1970. The WHO (1996) provides information on the estimated per capita consumption of cigarettes for adults 15 years of age and over in 1970-2, in 1980-2 and in 1990-2. In 1970-2 Greece was ranked 16th in the countries with the highest cigarette consumption per capita (2,640 cigarettes per smoker). In 1980-2 it leapt to 4th position (3,440 cigarettes) and in 1990-2 Greece moved in to the 2nd position (3,590). According to data from the WHO (1999) Greeks smoke more cigarettes per day (7.66) than any other European citizen. Each Greek smoker smokes an average of 2,797 cigarettes per year. In a study conducted by Steptoe, Wardle, Smith, Kopp, Skrabski, Vinck and Zotti (1995) it was found that 41% of Greek men and 38% of Greek women are current smokers. A more recent estimate of smoking prevalence among men and women of 15 years of age and above from the WHO (1996) placed Greece 29th in the world (46% of Greek men and 29% of Greek women were smokers). According to Kokkevi (1998) 60% of adult Greek men smoke regularly, while for Greek women aged 25-35 years old, the percentage reaches 38%. Unfortunately, the death rates are equally high. More than 7,000 people succumb every year to tobacco-related diseases and 5,000 of them die (Daoudaki, 1999). The president of the Institute for the Fight Against Cancer (1998) claims that 15,000-20,000 Greeks die every year due to cigarette smoking (2,000 of them being passive smokers).

The number of Greek adolescents who smoke is similar to that of British and American teenagers. According to Kafatos, Traka, Sarafidou, Stoikidou, Pantelakis and Doksiadis (1981), 18% of Greek adolescents aged 14-16 years smoke occasionally or regularly. Kokkevi (1985) reports that three quarters of

the adolescents (aged 14-18 years) have smoked at least once and 22% are regular smokers. The difference in the prevalence presented in the above mentioned studies may be a result of the fact that the subjects belong to different age groups. Davou conducted a study in 1992, according to which 19% of students smoked occasionally or regularly. Kokkevi (1998) uses a sample of 8,500 pupils aged 13-18 years old. The findings are that more than half of the pupils (57%) smoked at least once in their life. Most of them smoke occasionally (32.7%), while 20.8% of the pupils smoke regularly. There is a significant age difference, since older pupils (17-18 years old) smoke regularly five times more than younger pupils (aged 13-14 years old).

All the statistics that present the irreversible harm caused by cigarette smoking, as well as the increasing number of adolescents who experiment with or take up smoking, make smoking prevention critical. Yet, Greece is a country with a National Curriculum which is characterised by the lack of any health education orientation. Kokkevi (1998) reports that an ineffective anti-smoking campaign started 15 years ago. However, there is no information on this campaign, its main objectives and aims, where and how it is conducted. It is an anti-smoking campaign that nobody noticed, not even the scientists and the experts in the field. Davou (1992), for example, reports that there is no Health Education in the Greek curriculum. Headteachers and teachers participating in the present study confirm the lack of a Health Education Curriculum and the lack of any guidance or training for schools in this area. There is also no explicit and uniform policy on how smoking on school premises by staff and pupil should be handled.

1.2. Methodological issues regarding studies of smoking

The studies presented so far provide information on the amount of people who smoke world-wide and suffer from the consequences of cigarette smoking on their health. The studies that follow will be used in an effort to establish the background of the present research and will constitute the basis for comparisons, explorations of possibilities and solutions to the problems that may occur. Before these studies are reviewed it would be helpful to discuss some issues concerning the methods of data collection and the causal nature of the data, which are broadly relevant.

1.2.1. Methods of data collection

Researchers use mainly self-reports and questionnaires to obtain information from adolescents regarding their own smoking behaviour, their knowledge and attitudes towards smoking and the smoking behaviour of their family and peers. There is a general concern regarding the validity of self-reports and questionnaires, since it is argued that some people may choose socially desirable answers. Adolescents, for example, may try to mislead the investigator and under-report smoking behaviour out of embarrassment or in a desire to please. Or they may exaggerate smoking levels to appear older or to be uncooperative (Sussman, Dent, Mestel-Rauch, Johnson, Hansen and Flay, 1988).

1.2.1.1. Self-report smoking

In an attempt to obtain more accurate self-reports the *bogus pipeline* effect has sometimes been implemented. The bogus pipeline involves convincing subjects that their self-reports of attitudes, beliefs or values can be independently verified by the experimenter from some sort of physiological measuring apparatus that is, in fact, bogus. So, more valid self-reports were obtained if the nicotine analysis procedure is demonstrated to the subjects and they are asked to give specimens of saliva (Evans, Hansen and Mittelmark, 1977). Murray, O'Connell, Schmid and Perry (1987) studied the validity of smoking self-reports by 600 adolescents attending tenth grade and re-examined the bogus pipeline procedure. All students were tested for smoking both by questionnaire and by expired-air carbon monoxide assessment. The researchers conclude that biological measures are helpful but imperfect because adolescent smoking remains relatively rare and develops gradually. Among young adolescents, smoking is often appropriately characterised as a social display rather than as drug self-administration. As a result, biological measures are weakly correlated with self-reports of smoking among young adults. Moreover, Single, Kandel and Johnson (1975) – who investigated the reliability and validity of drug use response in a large scale longitudinal survey – point out that self-reports are a reliable measure of attitudes and potential errors have repeatedly been found to be insignificant.

1.2.1.2. Report of other's smoking behaviour

Some researchers argue that since the reports on parents' and friends' smoking status and approval/disapproval of smoking come from the respondents, there might well be an element of rationalisation and misperception by respondents. This may result in the adolescents' attempt to justify their behaviour with reference to the behaviours and attitudes of the others. Sherman, Presson, Benseberg and Olshavsky (1982), who examined the smoking intentions of adolescents, and Hatziaandreou, Pearce, Fiore, Grise, Novothy and Davis (1989), who studied the reliability of self-reported cigarette consumption in the United States, report that although not perfectly correlated, there is good correspondence between social influences and perceptions of others' attitudes towards smoking. Furthermore, how others are perceived seems to be more directly important than their actual attitudes (or behaviour) in determining smoking behaviour (Morgan and Grube, 1991; Iannotti and Bush, 1992). Bauman and Fischer (1986), who conducted two longitudinal studies in order to measure friend influence on adolescent smoking and drinking, suggest that subject reports on friends' behaviours reflect what subjects believe their friends do and this is more fundamental to influence and selection than what friends actually do.

1.2.2. Correlation Data / Causal Interpretations

In many of the studies of young people's smoking, there is a desire to identify the factors that cause smoking. However, the data gathered is often in the form of cross-sectional survey, producing evidence of statistical associations rather than

causal explanations. In order to proceed to causal interpretations variables are usually tested using the experimental method. Very few psychosocial features, though, can be measured in an experiment set up in a laboratory – mainly because it is practically impossible or unethical. This may lead to the exaggerated assumption that causal hypotheses cannot be tested in the social sciences. Rutter (1995) studied causal concepts and their testing and concludes that causation can be inferred from correlation but it should be noted that there are two main problems:

“Whenever a statistical association is found between two variables (a risk factor A and an outcome B), it is always necessary to exclude the possibility that the link is not due to the operation of a third variable C that is associated with both variables A and B. If the association between the risk factor A and the outcome B remains significant after the appropriate statistical controls have been introduced, a possible causal association is inferred. While this is a reasonable initial approach, it is impossible of ever being entirely sure that all relevant confounding variables have been included and adequately measured.

With cross-sectional studies there is the additional need to determine whether B led to A rather than the other way round. Even when third variable effects can be ruled out, there is necessary ambiguity in the direction of the causal influence." (pp. 8-10).

These issues regarding the strength and the direction of the causal inference should be taken into consideration when reviewing studies examining

psychosocial variables that cannot be measured using an experiment. Other methodological issues that are not mentioned in this section and concern certain studies will be pointed out in reference to each study.

1.3. IS SMOKING AN ADDICTION?

This is a question that has troubled scientists for many years. Although there is no doubt that other substances – such as cocaine and heroine – can be addictive, there is a debate about whether or not nicotine can cause addiction. If nicotine is addictive, there is an even greater need to prevent young people from experimenting with cigarettes and taking up the habit of smoking.

Davies (1992) reviewed the literature available on this issue and claims that it is generally accepted that smoking is an addiction. There are two acknowledged kinds of addiction: *physiological* and *psychological*. Physiological addiction stresses the importance of the effects of nicotine on the body, while psychological addiction emphasises the emotional and social dependence on cigarette smoking.

1.3.1. Physiological Addiction

Due to the nicotine that it contains, tobacco can be physiologically addictive. Kokkevi (1998) claims that the effects of nicotine on the brain are similar to those of other narcotics, like cocaine and heroine, and can cause similar dependence. Experiments on mice show that nicotine has similar neurochemical

properties as other narcotics. So, cessation of smoking can produce withdrawal symptoms, which are comparable in many ways to those caused by narcotics (Cogner and Petersen, 1984). Thornburg (1975) suggests that the 'addictive nature' of nicotine is due to its operation as a depressant, tranquilliser or stimulant. The basis of this approach is the disease-addiction model. Its prominent element is the tolerance-withdrawal theory. Exposure to a drug leads to physiological addiction to that drug. With increased use, it takes more of the drug to meet physiological needs. When use ceases or is reduced, the drug reaches too low a level for the tolerance that has been created, the person goes into withdrawal and physiological craving leads to continued use. Ingresoll (1989) reports that more than half of the teenage smokers who smoke half a packet (10 – 12 cigarettes) or more a day claim to have tried to give up and failed.

Eiser, Sutton and Wober (1978) conducted a study on smokers' and non-smokers' attributions about smoking. They obtained their data from 314 brief supplementary questionnaires attached to programme appreciation diaries distributed by the Independent Broadcasting Authority of London and returned by post. Smokers were asked how difficult it would be for them to give up cigarettes if they wanted to. Most smokers and especially women state that giving up cigarettes even if you want to is difficult. It should be noted though, that this finding could be a result not of the physical but psychological dependence on smoking.

1.3.2. Psychological Addiction

Regis (1990) wrote the article: “Is health education hooked on addiction?” in order to discuss the importance of addiction with respect to smoking, prompted by a remark in Curriculum Guidance 5 (Health Education) published by the National Curriculum Council, that: ‘Tobacco use causes addiction’. Before presenting some of the arguments that Regis puts forward, it should be stressed that they are not evidenced with empirical works.

Regis (1990) claims that most people give up smoking (and other habits) with no more than moderate difficulty. According to Regis there is powerful evidence against giving primacy to addiction as a factor in maintaining cigarette smoking. Although smoking may be ‘addictive’ to some extent, the dependence produced may not be the life-destroying shackle that has been suggested, and cessation may even be a relatively straightforward procedure. He argues that since heavy smokers can abstain for short periods without great difficulty when circumstances demand – e.g. miners at the coalface, religious observers on certain days, patients in hospitals - it is circumstance and not chemistry, which makes stopping difficult.

Regis (1990) suggests that other difficulties become apparent as well. It is estimated that one must consume about 20 cigarettes a day to become addicted, and it is known that even adult smokers do not usually smoke as much as this and in most cases smoke less than half as much. Furthermore, nicotine injections carried out in laboratory experiments do not reduce smoking as much as would

be expected if smoking were driven by a smoker's physiology. So the conclusion that addiction is a relatively unimportant factor in maintaining adult smoking seems the most reasonable one to draw. Young people don't smoke nearly as much as adults: 15-year-old smoking boys, who are the heaviest users, average fewer than five a week. Young people do successfully give up smoking in large numbers, so unless young people are very much more susceptible to addiction than adults, the weight of negative evidence above must act against addiction as an explanation of adolescent smoking. Metabolic changes appear to play only a minor role (if any) in addiction: they suggest that the addiction theory has been a 'failure', even when applied to drugs like opiates, thought powerfully addictive in adults and young people. However, a study by Kokkevi (1998) with a sample of 5,000 adolescents shows that out of the 24% of the smokers who try to give up smoking, only 1% succeed in giving up smoking for more than a year. This may be due to the physiological addiction caused by cigarettes or to the psychological addiction that is motivated by other factors – which are not substance-related.

Furthermore, Regis (1990) suggests that the difficulties that young smokers encounter when trying to give up smoking include:

- Their own belief that they are addicted.
- The belief of teachers and counsellors that they are addicted and
- The emphasis placed on 'addiction' in educative and counselling material.

Davies (1992) states in his book: "The myth of addiction" that explanation in term of addiction has three basic properties:

- A person is felt by him/herself and by others to carry out some behaviour too often, whilst neglecting other perceived moral responsibilities.
- The specific behaviour in question is seen by the larger society as shameful or morally reprehensible.
- The behaviour itself has an impact on the individual involved, but has no direct impact on others.

Eiser, Morgan and Gammage (1987) argue that addiction is not a physiological response, but a 'behaviour' that is socially learned. They base their argument on the study that they conducted on smoking prevalence and smoking beliefs among 10,579 pupils from 10 co-educational comprehensive schools from the Bristol conurbation. There were recognisable inter-relationships between variables that are often taken as indicative of more addictive smoking in adult smokers - self-reports of anticipated difficulty in stopping, craving, consumption, inhalation and brand preference. Yet the actual levels of consumption were still low by adult standards, the means (for current smokers only) being 4.03 cigarettes per day and 20.76 per week. So, they claim that young experimental smokers could develop expectancies of the psychological effects of smoking well in advance of any 'genuine' pharmacological gratification. In other words it is not just smoking behaviour that is socially learned but also certain expectancies such as 'smoking calms your nerves' or 'smoking is difficult to give up' and these may well shape the young smoker's interpretations of what is probably an ambiguous emotional experience (the participants had to express their opinions about a set of 13 belief statements regarding smoking). However, the questions probing young people's

explanations of their smoking may have been phrased in a way that elicited socially learned accounts.

Eiser, Sutton and Wober (1978) studied the relationship between the smokers' wish to give up smoking and their perceived ability to do so. A short postal questionnaire was completed by 115 smokers aged 18 years and over. They were asked: how much they smoked; whether they would find it difficult to give up; whether they would like to and; whether they had ever tried to do so. Moreover, they were asked if they regarded themselves as being addicted. Eiser and his colleagues found that smokers use the term 'addicted' to account for their inability to stop smoking cigarettes. Judging from the relatively small number of smokers who succeed in giving up, they argue, there are strong reasons to regard tobacco and more specifically nicotine, as a dependence –producing drug. It should be pointed out, though, that addiction in the individual is typically measured at least partly in terms of verbal self-reports of subjective craving and perceived difficulty of abstinence. Such measurements might well reflect the influence of social psychological and cognitive factors, over and above any purely pharmacological effects.

The addiction caused by cigarettes may not be physical and perhaps not even really psychological – beyond the fact that young people may believe they are addicted, which can become a self-fulfilling prophecy. But before addiction becomes an issue, what makes an adolescent accept or turn down the offer to try a cigarette?

1.4. Theories associated with adolescent smoking

In an effort to answer the question of what influences the adolescent in his/her decision to experiment with smoking and start smoking or not, it is useful to look at the prevalent theories in the field of adolescent smoking.

1.4.1.Social-Learning Theory

Bandura introduced the social-learning theory in 1977. According to Bandura, modelling, otherwise known as imitation or observational learning, is the basis for a wide variety of children's behaviours. He recognises that children acquire many favourable and unfavourable responses simply by watching and listening to others around them. Subsequently, siblings, parents, friends, teachers or significant people in children's lives act as behavioural models. Some researchers use these behavioural models to test Bandura's theory. The main weakness in Bandura's theory is in the insignificant role given to cognition in shaping behaviour.

Bandura himself came to the same conclusion when observing that children's ability to listen, remember and abstract general rules from complex sets of observed behaviour affects their imitation and learning. The most recent revision of Bandura's theory (1986, 1989, 1992) places such strong emphasis on how children think about themselves and other people that he calls it a social cognitive rather than a social learning approach. According to this view, children gradually become more selective in what they imitate. From watching others

engage in self-praise and self-blame and through feedback about the worth of their own actions, children develop personal standards for behaviour and a sense of self efficacy (beliefs about their own abilities and characteristics), that guide responses in particular situations. So, according to Bandura, children are affected by what they witness (e.g. their parents, siblings, friends or teachers who smoke), but they do not necessarily copy this behaviour.

1.4.2. Theory of Reasoned Action

The second prominent theory in the field of adolescent smoking, the theory of reasoned action, stresses furthermore the importance of cognition in determining behaviour. Ajzen and Fishbein (1980) introduced the theory of reasoned action, which is based on the assumption that human beings are usually quite rational and make systematic use of the information available to them. It does not subscribe to the view that human social behaviour is controlled by unconscious motives or overpowering desires, nor is it believed that it can be characterised as capricious or thoughtless. People consider the implications of their actions before they decide to engage or not engage in a given behaviour. Therefore this theory is called: 'theory of reasoned action'. The first step toward understanding and predicting an individual's behaviour is to identify and measure the behaviour of interest. Once the behaviour has been clearly defined, it is possible to ask what determines the behaviour. A person's intention to perform or not perform a behaviour is the immediate determinant of the action. Barring unforeseen events, a person will usually act in accordance with his or her intentions.

The notion that intentions predict behaviour does not provide much information about the reasons for the behaviour. In order to understand the behaviour, the second step of the analysis is to identify the determinants of intentions. A person's intention is a function of two basic determinants, the first being personal attitude and the other social influence.

1.4.2.1. The personal factor

The personal factor is the individual's positive or negative evaluation of performing the behaviour; this factor is termed his or her *attitude* toward the behaviour. It simply refers to the person's judgement that performing the behaviour is good or bad, that he/she is in favour of or against performing the behaviour. However, summative measures of attitude may oversimplify the complexity of people's judgements. For example, smokers may regard perceived benefits of smoking such as relaxation as more important, whereas the negative health consequences may be more salient to non-smokers. Eiser et al. (1987), based on a study conducted among pupils of secondary schools, found that the relative importance of different expected consequences varied from individual to individual. Moreover, Goddard (1994) in her survey among secondary school children found, that although a lot of teenagers, including smokers themselves, exhibit a negative attitude towards smoking, they do take up the smoking habit.

1.4.2.2. The subjective norm

The second determinant of intention is the person's perception of the social pressures put on him to perform or not perform the behaviour in question. Since it deals with perceived prescriptions, this factor is termed the subjective norm. Generally speaking, individuals will tend to perform a behaviour when they evaluate it positively and when they believe that important others think they should perform it. This determinant of behaviour, though, can not account for the fact that many smoking adolescents still continue to smoke though they **believe** or **know** that important others disapprove or would disapprove of their smoking, if aware of it.

Moreover, according to the theory of reasoned-action, variables such as demographic characteristics, personality traits and traditional measures of attitudes towards persons, institutions and policies have no necessary relation to any particular behaviour, since they have no consistent effects on the beliefs underlying these behaviours. This belief contradicts the findings of a number of studies, which support that personal factors and personality traits such as self-esteem or self image (Wayne, 1991), inclination to risk-taking (Cogner et al., 1987), rebelliousness (Royal College of Physicians, 1992), curiosity, desire for autonomy (Thornburg, 1975) and anxiety (Penny and Robinson, 1986) are predominant characteristics of smokers.

Assessing the validity of the theory of reasoned action, Godin, Valois, Lepage and Desharnais (1992) conducted two studies among adults of the general

population (study 1) and a group of pregnant women (study 2). In both studies, baseline data was collected at home with trained interviewers and with the use of paper and pencil questionnaires. The self-report on behaviour was obtained 6 months (study 1) and between 8 and 9 months (study 2) after baseline data collection. It was found that perceived volitional control is strongly related to initial attitudes towards targets, whereas habit has only tenuous association with target attitudes. It was concluded that the theory of reasoned action is particularly valuable when describing behaviours that are totally under volitional control. However, most behaviours are located at some point along a continuum that extends from total control to a complete lack of control. Perceived behavioural control can influence intention, as well as attitude and subjective norms. The subject's perception of the difficulty of giving up smoking cigarettes (behavioural control) influences the intention of the subject to smoke, the subject's attitude and the perceived attitude of the society towards smoking. A criticism of this theory is that it predicts intention from attitude and subjective norm, but ignores previous behaviour (Eiser et al., 1989).

1.4.3. Theory of Cognitive Dissonance

The theory of cognitive dissonance has been invoked to explain this sort of paradox, that someone may believe smoking is bad but still do it. Cognitive dissonance is a theory presented by Leon Festinger (1957). According to this theory when a person has two cognitions (sets of ideas) that are inconsistent he/she is likely to experience dissonance: *a state of 'psychological discomfort or tension'*. As dissonance is experienced as a negative drive state, a person is

motivated to reduce or eliminate it. Smoking is a behaviour that has frequently been used to illustrate the concept of dissonance. Most people, even smokers, wish to remain in good health; yet there is considerable evidence, from medical research, that smoking cigarettes seriously damages health.

According to Festinger's theory people who smoke cigarettes are likely to experience dissonance. One way of removing this dissonance would be to give up smoking, but this can be difficult – some people enjoy smoking and do not wish to stop. Another way that smokers have of reducing dissonance is to deny, or at least to play down, the evidence that there are serious health risks attached to their habit. It could be argued at this point that they smoke exactly because they are unaware of the health risks associated with cigarette smoking. If smokers do know the health risks involved in smoking, it is suggested that they are more likely than non-smokers to view smoking as having low health risks attached to it. They rate the effects of active and passive smoking as less dangerous than do non-smokers. Some research has shown smokers to have the same knowledge about smoking as non-smokers, while others have found less knowledge and more rapid forgetting. Smokers are more likely to question, criticise or ignore smoking-related information (McMaster and Lee, 1991). A general tendency is found for people to be unrealistically optimistic about their chances of avoiding illness and life hazards (Weinstein, 1982).

McMaster and Lee (1991) wanted to measure the knowledge and beliefs about smoking of smokers, non-smokers and ex-smokers within a cognitive dissonance framework. The 186 respondents (mean age = 25 years) completed a

questionnaire concerned with smoking habits, knowledge of the effects of smoking, beliefs about smoking and estimates of risk of lung cancer to themselves and to the average Australian smoker. Smokers estimated their risk of contracting lung cancer as greater than the risk non-smokers or ex-smokers perceived, but less than the risk for the average Australian smoker. This suggests that smokers somehow protect themselves from an awareness of the personal effects of smoking. This could mean that the smoking respondents see themselves as personally immune from the effects of their smoking in comparison to other smokers. It could also mean that what constitutes the average Australian smoker is not very clear. No differences were found in the amount of factual knowledge about the effects of smoking. However, smokers endorsed significantly more rationalisations and distortions of logic regarding smoking than did ex-smokers or non-smokers. So it could be assumed that smokers have a subtle way of minimising dissonance, that is, doubting the validity of the accepted facts about smoking.

Festinger (1957) also hypothesised that the strength of the pressure to reduce dissonance is a function of the magnitude of the existing dissonance. Hence, one would expect the dissonance experienced by smokers to be directly linked to the number of cigarettes smoked per day, since those smoking more would be in greater conflict with the health information to which they are exposed. Subsequently, heavy smokers are expected to distort health information about smoking to a greater extent than light smokers or non-smokers. This finding is supported also by Dawley, Fleisher and Dawley (1985), who measured the attitudes toward smoking among 130 non-smokers and smokers aged from 18 to

84 years (mean age = 43 years). They administered questionnaire consisting of 13 attitude items. It should be mentioned that there is not adequate information on the instrument and the method used.

The presence of 'dissonant' smokers is seen as posing not only a theoretical, but also a practical dilemma. Eiser et al. (1978) suggest on the basis of their study that dissonant smokers do not seem to be a good target for anti-smoking persuasion. To a large degree they already have the required attitudes: their problem is not whether to stop but how to stop. Regis (1990) suggests that rather than get too heavily into the psychological approaches, we must not dismiss young people and others who smoke as irrational because they smoke while believing that smoking is unhealthy, but neither must we dismiss them as helpless addicts. Instead, we must look at what else it is they believe that they derive from smoking.

The theories presented so far cannot adequately account for the complexity of the psychosocial variables associated with adolescent smoking. This may be due to the fact that they consider that smoking is a single phenomenon, rather than a stage process, as supported by the theory of stages.

1.4.4. Theory of Stages

Stern, Prochaska, Velicer and Elder (1987) conducted a study using 202 students as participants from grades six through to eleven, representing five different public schools in two districts. A questionnaire was administered for the

collection of data. While considering their findings, it should be kept in mind that the sample is quite small. Four variables were identified to describe the acquisition process: a) current smoking behaviour, b) future intent to smoke, c) attitude toward smoking, in terms of the perceived positive and negative consequences and d) amount of pleasure derived from smoking. Combining these variables with the stages of acquisition concept, the following definitions of smoking onset were developed:

a. Pre-contemplation: The youngsters have not yet begun to think of or have no desire to start smoking in the future. They may be never-smokers or ex-smokers and are either unaware of positive reasons to start smoking or are ignoring or resisting pressures to smoke. During this stage knowledge, values, beliefs and attitudes are built up and interact with social factors. Together they set the scene against which the child will or will not decide to take the step towards smoking (The Royal College of Physicians, 1992).

b. Contemplation: At some stage in their life most children are probably actively encouraged to try or not to try smoking. This is likely to happen more than once in a child's life as he or she encounters new peer groups. This is why no specific age group can be associated with the stage during which the child thinks about the advantages and disadvantages of smoking (Leventhal and Cleary, 1980). Friedman, Lichtenstein and Biglan (1985) suggest that such preparation increases the likelihood of smoking. In their study of 157 adolescents in grades seven through to twelve, Friedman et al. (1985) found that young people who smoked were more likely to have planned to smoke, to have their own cigarettes more

frequently and to take available cigarettes without hesitation. Developmentally, the age range which represents middle childhood (9-12 years) is said to be that period in which risk factors connected with the development of subsequent health problems are in danger of becoming established - problems that include cardiovascular disease and stroke (Thrush, Fife-Shaw and Breakwell, 1997).

c. Initiation and Experimentation: Initiation (trying the first cigarette) is as far as most children take the smoking process. The peak of experimentation starts earlier for boys (9-12 years old) than for girls (10-13 years old) (The Royal College of Physicians, 1992). Wartburton, Revell and Thompson (1991) in their review of smoking literature suggest that the onset of smoking mostly occurs around the age of 13 to 14 years in developed countries and India. Initial situations are much more likely to involve others of the same sex. Friedman and his colleagues (1985) found that in roughly half of the incidents of experimentation, another young person was also trying for the first time. At this stage the young person is not totally committed to smoking in the future and is still deciding whether or not it is for them (Stern et al., 1987).

Experimentation is important for young people and should not be considered as delinquent or maladjusted development. Nonetheless, it is important to recognise the context in which the onset of experimentation occurs, because experimentation can lead to habitual use of substances such as tobacco, with various psychological and social factors combining to provoke the progression from experimentation to further drug use (Botvin and Wills, 1985).

d. Regular smoking: McNeill (1991) carried out some research on the progression of the smoking behaviour of 2,938 schoolchildren, who participated in two surveys 30 months apart. The children were aged 11-13 years in 1983, but there is no information on the method used to obtain this information (self-report questionnaires, interviews or both). She found that perhaps only a third to one half of those young people who experiment with cigarettes go on to become regular smokers. Children who have smoked only once or twice have odds four times greater than never smokers of having taken up smoking 30 months later. The development of a regular smoking pattern has been reported to take about 2 years. By the age of 14 or 15 smoking or non-smoking behaviour is an established pattern and little experimentation takes place thereafter (McKenna, 1970).

Lloyd, Lucas, Holland, McGrellis and Arnold (1998) carried out two inter-linked studies in the London and the Sussex area obtaining both qualitative and quantitative data, with a sample consisting of pupils ranging from 11 to 17 years. One of the findings is that maintenance of smoking in young people is strongly influenced by a number of personal and social factors. The transition from occasional smoking to regular smoking appears to be less strongly influenced by family smoking patterns. Nevertheless, when taken together, both parental and sibling smoking models do influence the transition to regular smoking. It should be mentioned that Lloyd et al's claim that the consistencies over a number of samples gives us greater confidence in the results is not adequately substantiated.

Morgan and Grube (1991) point out that the most interesting feature of the results of many studies is the contrasting pattern of the acquisition and maintenance phases. Whether these changes reflect actual changes in friendship patterns or an equally interesting change in perceptions consequent on usage, is a matter for further investigation.

Despite the fact that a considerable number of adolescents go through the smoking stages, most of them stop at experimentation and only roughly 20% of them become regular smokers.

The theory of stages is supported by research and it has introduced a new concept about cigarette smoking that emphasizes the fact that the acquisition of the habit of smoking is a long procedure. The theories of social modeling, reasoned-action and cognitive dissonance have many limitations, since they are not able to account for a phenomenon that is as complex as adolescent smoking. They are substantiated – to some extent – by the extensive research in the area of adolescent smoking but they are not adequate enough to describe its course of development. The theory of social modeling cannot account for the adolescents who are exposed daily to smoking models and choose to abstain from smoking or not to take up the habit – which is the majority. The theories of reasoned action and cognitive dissonance cannot explain how an attitude/behaviour is acquired in the first place; they explain only what results in terms of attitudes/behaviours. The most widely-used method of testing these theories is to examine the factors that influence adolescent smoking, in an effort to discover the extent to which each of these theories is valid and applicable.

1.5. Factors that influence adolescent smoking

Each of the factors will be examined separately, so as to enable the reader to estimate the influence that they may have on adolescent smoking according to the evidence that is presented.

1.5.1. Parents

In the case of parental influence, in the majority of studies reviewed a significant association has been found between parent and child smoking. There is less consistency, however, in how to interpret this finding. Some studies emphasise that parents act as behavioural models for their children, participating actively in their children's decisions to take up smoking or not, while others doubt that this particular type of parental influence actually exists.

In a large survey of secondary schoolchildren Goddard (1990) found that children who smoke are significantly more likely to report having parents who smoke. Green, Magintyre, West and Ecob (1991) found that pupils are actually twice as likely to smoke if their parents smoke, than they are if their parents are non-smokers. From the point of view of the social-learning theory, some direct modelling effects due to parental behaviour itself may account for this phenomenon (Bandura, 1977). So, adolescents with non-smoking parents may view non-smoking as the norm and adolescents with smoking parents may view smoking as the norm.

Skinner, Massey, Krohn and Lauer (1985) studied the social influences and constraints on the initiation and cessation of adolescent tobacco use. This study is part of a longitudinal research project concerned with adolescent tobacco use in a small midwestern city (population 23,000). Students attending two junior high and one high school were administered questionnaires during the Spring of 1980, 1981 and 1982. It was found that even if smoking parents expressed their disapproval of smoking and claimed that they would like to give up, the fact that they smoked increased the chance that their children would smoke too.

Green, Macintyre, West and Ecob (1991) examined the associations between drinking and smoking behaviour of parents and their children using data collected from a cohort of young people and their parents (1,700 in total) residents in the west of Scotland. They found that parental smoking behaviour was independently associated with young people's smoking, with young people whose parents smoked being more likely to smoke. So, they suggest that parents who smoke usually have children who smoke, although inverse relationships are sometimes posited to occur because of revolt against parental values and behaviours. Since correlational analysis was used for the examination of the data, it should be reminded that causal interpretations and their direction cannot be established, although it seems unlikely that children's smoking could cause their parents to smoke. So the causal relationship is more plausible here than in the case of peers.

There are other studies, however, which question the modelling influence of parental smoking behaviour on adolescent smoking. Stanton and Silva (1992)

report that there is little evidence to support the general view that children model or are motivated directly by parental behaviour. They based their findings on a longitudinal study they conducted, following changes in the smoking behaviour of a large cohort of children through childhood and adolescence. They obtained information about smoking from self-reports at five measurement points, spanning eight years of children's development. Information was gathered on the smoking habits of not only the children, but of their parents and friends as well. The aim of the study was to examine the proposals that: "the influence of parents and peers on children's and adolescents' initiation of smoking is or is not similar in magnitude and whether or not parents who quit smoking influence children and adolescents not to smoke". They propose that the analysis of the results have implications for the view that children model the smoking or non-smoking behaviour of parents. Children tend, in general, not to follow the model of an ex-smoker parent, which suggests that children's initiation of smoking could be more a function of curiosity and availability of cigarettes. They also claim that a statistically significant association between parents and their children is based on non-smoking behaviour. They support that: "this trend can be interpreted more parsimoniously as the result of children not being exposed to smoking rather than as active modelling of non-smoking behaviour". It should be mentioned that it is not very clear how the researchers reach these conclusions on the basis of the correlational data that they have gathered. Moreover, Stanton and Silva are questioning the usefulness of modelling as a mechanism, but even if children smoke because of 'availability' or 'curiosity', parents are still influential.

Flay, Hu, Siddiqui and Day (1994) studied the differential influence of parental and friends' smoking on adolescent initiation and escalation of smoking of 1,400 adolescents. They found that the association between parental smoking and the smoking behaviour of their children is not statistically significant. It should be mentioned that a limitation of this study is that the students who came from disrupted families were excluded. But then again it may be that children from disrupted families smoke because of the problems that they face in the family environment and not because they copy the behaviour of their parents.

This parameter was examined by Isohanni, Moilanen and Rantakallo (1991), who examined the relationship between juvenile smoking and family background among 9,461 children who lived with their biological married parents and 2,319 children living in a non-standard (e.g. single parent) family. They found that significantly more children from non-standard families smoked. An elevated risk of smoking existed among children who had experienced the death or the divorce of their parents. They suggest, subsequently, that adolescent smoking may be a kind of indicator of possible problems experienced by the parents and / or the adolescents themselves, with respect to parenthood and family development. This finding needs further support and investigation, since the increased percentage of adolescent smokers, which was observed may be due to the lack of parental supervision and monitoring, the smoking behaviour of other relatives, siblings or friends or the socio-economic background of the family.



Research in the area suggests that an important predictor of young people's smoking is not parental behaviour or encouragement, but the young person's perception of parental attitudes towards the child's smoking behaviour.

Thrush, Fife-Schaw and Breakwell (1997) reported the results of a large-scale survey of 1,985 9-12-year olds' representations of parents' views about the nature of smoking. Questionnaires were used to identify the adolescents' consensual representations of the views of significant others (parents and friends). They found that perceived parental attitudes towards the child's smoking behaviour are more important than the actual parental smoking behaviour.

Eiser, Morgan, Gammage and Gray (1989) administered questionnaires to measure the self-reported smoking habits and intentions of over 14,000 adolescents, aged 11 to 16 years, which were related to a variety of attitudinal and normative variables. They found that children are 7 times less likely to smoke if they perceive strong disapproval from their parents. As parents are not merely models for behavioural imitation, their disapproval of their children's smoking remains an important influence, even when they smoke themselves. It is worth examining, though, whether the process of influence is the same in smoking and non-smoking households and if the smoking behaviour of siblings is of any importance in this process. The notion that how others are perceived is more important than their actual attitudes in determining behaviour is supported also by the study of young people's substance use conducted by Morgan et al (1991).

This conclusion was also reached by Bolling (1993), based on the results of his survey of secondary school children. Aitken (1980) obtained information from 384 children aged 10 to 14 years in Central Scotland. They were interviewed and asked about peer group pressures, parental controls and cigarette smoking. It was found that the adolescents who said they smoke tried to conceal their smoking behaviour from their parents (especially girls) but they did take up the habit eventually.

The studies on parental influence focus on the role of the parents as behavioural models and on the perceived attitude of the parents towards their children's smoking. The findings seem far from conclusive, since there is a disagreement on whether parents are able to influence their children or not – directly or indirectly. An important consideration that the majority of studies seem to omit is that the adolescents cannot be treated as a whole. They are individuals with different needs, characters and relationships with their parents. It is possible that parents do act as behavioural models to the extent that their children allow them to. Most children believe that their parents will disapprove of their smoking, but if they decide to experiment with cigarettes or take up smoking they will do so. This is the point at which all the personal elements impact and make a difference.

1.5.2. Siblings

Siblings are considered to be a very important source of influence on adolescents' smoking, acting as a behavioural model (Ingersoll, 1989; Lader and Matheson, 1990). Goddard (1990) conducted a survey among roughly 2,500

secondary school children. She found that: 29% of pupils who had at least one brother or sister who smoked were regular smokers themselves, compared with 6% of those who had siblings who were non-smokers and 9% of those who had no siblings living at home with them.

This suggests not only that pupils are very much more likely to be smokers if they have siblings who smoke than if they do not, but also that the presence of non-smoking siblings at home may actually reduce the likelihood of a pupil being a regular smoker. It may be a protective factor, though this pattern of results suggests that having a non-smoking sibling is like having no sibling, so not much influence. This pattern of differences is also apparent in the proportions of children who had never smoked, suggesting that the presence or absence of smoking siblings also influences the extent to which children experiment with smoking, and, furthermore, that the presence of non-smoking siblings may discourage experimental smoking. There are no differences in the effect of siblings' smoking when boys and girls are considered separately. Experimental and occasional smokers are not distinguished in this study. It would be of interest to examine if siblings have any kind of influence on the adolescents who have experimented with smoking once or who smoke occasionally and are not yet considered to be regular smokers.

Eiser et al. (1978), suggest that siblings constitute a special category of peer influence and they can act as role models by reinforcing certain behavioural patterns. Older siblings' influence on adolescent substance use is considered to be greater than peers' influence. Friedman, Lichtenstein and Biglan (1985)

attempted to identify factors associated with smoking onset among teens in their study. They investigated the first three smoking or smoking pressure experiences using in-depth structured interviews with 157 adolescents including persistent experimental smokers (who smoked more than 10 cigarettes), minimal experimental smokers (who smoked less than 10 cigarettes) and non-smokers. They found that in the vast majorities of cases, the final similar catalyst to initial smoking is a social situation in which siblings are smoking. This study had certain limitations: only two schools were sampled thus constraining generalisability, the subjects of the study were self-selected being thus susceptible to volunteer-bias. It could also be the case that other variables, such as parental smoking behaviour, availability of cigarettes in the house, common friends and activities offer possible explanations for the findings presented above by Eiser et al. (1978) and Friedman et al. (1985). It would also be useful to examine the siblings' potential influence during the different stages of smoking (especially the experimentation and regular smoking stages) and possible changes over time and at different ages. If it is true that parental and friends' influence on adolescent smoking declines with age (Coleman and Henry, 1990), the same could be true for siblings' influence.

1.5.3. Friends

Although parental influence on children's beliefs and behaviours will generally persist throughout life (regardless of whether it concerns smoking behaviour or not), the child is also exposed to important social models such as peers whose health beliefs and behaviour may differ from that of parents. In a large scale

survey Lau, Quadrel and Hartman (1990) explore the development and change of preventive health beliefs and behaviour in 947 young adults and how this was influenced by parents and peers. They used the longitudinal data set that they gathered in order to explore the sources of stability and change in young adults' health beliefs and behaviour concerning drinking, diet, exercise and wearing seat belts. The data addresses the chief socialisation processes by which adolescents learn to perform preventive health behaviours. Although parents' explicit training efforts were associated significantly with respondents' behaviour at baseline in all four areas, the association between respondents' behaviour and peers' behaviour in those same domains was substantially higher.

The most popular notion regarding peer influence is that it is the trigger for the initiation of smoking in adolescence. According to Bandura's theory of social influence peers act as behavioural models. Adolescents and their friends resemble one another in their smoking habits. This view is supported by Ennett, Bauman and Koch (1994), who looked into the context of adolescent peer groups (friendship cliques). Formal network analysis was used to identify 87 adolescent friendship cliques in a sample of 1,092 ninth graders at five schools. Intra-clique homogeneity and inter-clique heterogeneity in current cigarette smoking was found, confirming that smokers tend to be in cliques with smokers and non-smokers tend to be in cliques with non-smokers. It should be noted that most cliques were comprised entirely or mostly of non-smokers, suggesting that friendship cliques may contribute more to the maintenance of non-smoking than to the onset and maintenance of smoking. A limitation of the study is that the cliques studied did not include 'deviant' cliques, where smoking is considered to

be more common. But even if members of 'deviant' cliques are found to smoke more, this still supports the notion of peer selection and protection of the group's acceptable behaviour. Additionally, adolescents were restricted to nominating only those from within their own group in school as friends.

When examining peer influence, it should be taken into account that a peer group should not be considered as an undifferentiated whole. One cannot simply take a sample of same-age pupils from a school and assume that these constitute a psychologically meaningful and unitary group for the individuals within the sample (Eiser et al., 1984). Any kind of influence varies with the closeness of peer relationships.

Morgan and Grube (1991) studied closeness and peer group influence. A questionnaire was completed by Dublin post-primary pupils in February 1984 (2,997), in March/April 1984 (2,782) and again in March/April 1985 (2,057). Anonymity and confidentiality were guaranteed and a range of variables relating to drug use were examined. It was found that the influences related to peers identified by respondents as 'friends' were better predictors of use than were the corresponding factors relating to same-aged peers. Thus, it could be argued that influence processes can be understood in the context of young people's identification with particular subgroups, distinguishable from other subgroups on a variety of characteristics (Fergusson et al., 1995).

Moreover, adolescent culture may consist of multiple peer groups with different norms for attitudes and behaviour that provide varied opportunities for affiliation

with groups having different norms or standards for social comparison (Goethals and Darley, 1977). In that respect, the individual is not a passive victim who needs to be trained to resist all external pressures. Young people belong to groups (or want to belong) and such groups, within limits, are of their own choosing. In an important sense, young people choose the influences they experience. In fact, they serve as role models of non-smoking or smoking behaviour for their peers and for impressionable younger children (Eiser et al., 1984).

It could be argued, subsequently, that children who engage in early smoking experimentation tend to affiliate with adolescent peer groups whose members smoke. In turn, these peer group affiliations reinforce pre-existing tendencies to cigarette smoking. Looking at cigarette smoking in the context of friendship choice, it may be that smoking simply co-varies with other psychological or psychosocial variables that are important in the selection of friends or the maintenance of friendships already formed.

Krohn, Massey, Skinner and Lauer (1983) researched the social bonding theory and adolescent cigarette smoking within a longitudinal design. The research is based on a two-wave panel study of 1,405 students in grades 7 through 12. It was found that since cigarette smoking is a particularly social activity, it is not surprising to find that adolescents who were attached to their friends were more likely to smoke than were adolescents who were not strongly attached. Krohn et al. also stressed that smoking is one means by which young people may seek to integrate themselves into particular adolescent cliques. It should be mentioned

though that although some adolescents and their friends resemble one another in their smoking habits, most young people tend to choose as friends those who are somewhat similar to them in a whole variety of attitudinal, behavioural and background characteristics. Such similarity remains just as recognisable among those groups of friends who happen not to share each other's smoking habits.

This finding was supported by Eiser, Morgan, Gammage, Brooks and Kirby (1991), who conducted a study on the adolescent health behaviour and similarity-attraction. They assessed the smoking habits and related attitudes in a sample of 4,059 11-to-16-year-olds who identified their best friends from among their fellow respondents. The subjects' responses were directly collated with those of their friends and indicated a clear co-variation, which was not specific to smoking habits, but generalised to related measures of attitude and normative beliefs, alcohol use, health locus of control, school performance, spending habits and socio-economic status. They showed that the similarities on these other attributes were much the same, regardless of whether or not friends shared each other's smoking habits.

This study seems to make an important point – that peer selection is based on a wide range of factors, not just smoking and attitudes to smoking - which is not taken into account by a body of research. Bolling (1993) carried out a study among secondary school children in England. The analyses of the results of this research point to the conclusion that having friends who smoke is the most important predictor of smoking for both boys and girls. He reports that there is a

clear association between pupils' smoking behaviour and that of their friends – in particular, 76% of regular smokers said that all or most of their friends smoked.

In a survey in Northern Ireland in 1982, by far the largest proportion of 2,444 16-year-olds sampled, cited as the most frequent reason for their smoking, the fact that they wanted to be like their friends who smoked. They also reported that a friend was the source for their first cigarette (Wayne, 1991). Sussman (1989) in a paper describing normative and informational social influence suggests that most adolescents experiment with tobacco in a social context with friends of the same sex. Moreover, Noller and Gallan (1991) found that 90% of adolescent smokers claim that they started smoking with same sex friends. West et al. (1999) conducted a longitudinal survey on 1009 15-year-olds. They were interviewed at baseline, followed up at 16, 18, 21 and 23 years of age. They concluded that friends' smoking is of continuing significance, especially around school-leaving when friendship networks often change markedly. These studies support the conclusion that adolescents smoke because their friends do so. If teenagers have friends who smoke, they are pressured by their friends to smoke as well, either directly (offers of cigarettes) or indirectly (modelling).

While reviewing these studies and the conclusion that derives from them, we should keep in mind the following arguments:

a) Smoking is a minority activity. So, if succumbing to peer group influence simply involves doing the same as one's peers then on balance peer group influence should discourage rather than encourage young people to smoke. If one's investment is in individual differences, it would be among the non-smokers

rather than the smokers that one might first look for signs of weakness and persuadability (Eiser et al., 1984).

b) Friendship can be described as children's mutual preference for one another. Although certain characteristics of a friendship endure throughout a lifespan, the meaning of friendship changes with development (Rubin, 1980). The same principle applies to the progress of group influence, from the point of interaction and experimentation with smoking through occasional to continued and heavy use. For example, a group may exert considerable pressure upon a 14- or 15-year-old to experiment but relatively little pressure to continue smoking on a 17- or 18-year-old who has tried smoking and found it irritating (Eiser et al., 1991). This finding is consistent with the belief that the amount of any influence that friends exert on adolescent decreases with age (Coleman et al., 1990). It would be of interest to determine the amount of friends' influence (if it exists) at each developmental stage and at each stage of smoking experimentation and acquisition separately.

c) The notion of direct peer pressure is not sufficiently supported by evidence. Urberg, Shyu and Liang (1990), studied peer influence in adolescent cigarette smoking. They gathered data from self-reports provided by 2,334 suburban adolescents in grades eight and eleven in a large metropolitan area. These subjects reported low levels of normative and direct pressure to smoke by friends. Actually adolescents appear to see the peer group not as encouraging them to smoke, but as not providing any discouragement from smoking. Moreover, adolescents who do not smoke report little or no pressure from their

friends and believe that their friends would disapprove if they started. If they already smoked, then their friends tolerated their behaviour, but did not approve of it. Adolescents rarely expected their friends to favour, much less pressure them to begin cigarette smoking. So a friendship group may function as a source of social support for smoking (or non-smoking) rather than as source of any kind of coercive or un-anticipated persuasion.

The above mentioned findings derive from a study conducted by Kafka and London (1991), who focused on the communication in relationships and its relation to adolescent substance use. The data was gathered from questionnaires and interviews that took place at an urban and a suburban/rural high school in New England with 37 students (the small sample constitutes a limitation of the study).

Stanton and McGee (1996) reached the same conclusions. In order to gauge the level of active social influence among adolescents, they asked 14-15 year-old students what they did to influence others not to smoke or to smoke, using questionnaires that included open-ended questions. A quarter of the students were found to be active in promoting non-smoking. This usually took the form of a general comment that the person should give up or not smoke, usually directed towards friends, though a potentially large number of comments were directed towards parents and relatives. Of the total sample, only 3% promoted smoking by actively encouraging or forcing friends, siblings or acquaintances to smoke. The authors point out that these prevalence figures should be regarded as conservative estimates because the question regarding the direct influence that

they exert on others was open-ended. Presentation of a list of potential activities would most likely result in more reports of pro-smoking and anti-smoking activities due to the prompted recall and because some students would not have conceived the particular activities as influencing someone to smoke or not to smoke. It should be stressed, as well, that although the percentage of students who actively promote smoking is relatively small, each one of them is capable of influencing several others to smoke each day and may represent a significant factor in the spread of smoking among younger students. However, it cannot be argued that direct influence is not the main form of social pressure experienced by students.

The co-variation of smoking and friendship patterns therefore, is not primarily or necessarily a sign of peer group pressures to smoke as much as evidence of a division of the peer group. Similarities in patterns of tobacco use probably result from selection of friends as well as pressure from friends. Peer pressure accounts for between 10% and 40% of the variations in teenagers' smoking behaviour. When peer influence is assessed in terms of similarity between friends or increases over time in friends' similarity, the nature of their influence is as likely to be positive as negative (Feldman et al., 1990). Lloyd, Lucas, Holland, McGrellis and Arnold (1998) point out that while peer pressure to act in certain ways is something all adolescents seem to have heard about as a concept, it is generally held to be something that happened to other people.

The conflicting findings are as evident as in the case of parental influence. Does 'peer pressure' exist or should we talk about 'peer selection'? It is documented

that adolescents tend to experiment when in the presence of friends, who are sometimes the source of the first cigarette. Isn't that expected to be expected, given the fact that adolescents experiment with a variety of things when in the presence of people of the same age who share the same interests? There are many adolescents who experiment with smoking together with their friends but do not become occasional or regular smokers. Isn't this an indication of a personal choice?

Michell and West (1996) reported that the key finding from their study was that different research methods elicit different and conflicting accounts of smoking behaviour and, in particular, of initial smoking situations from the same pupils. They found that an important distinction exists between their expectations and beliefs about peer pressure to smoke and their own subsequent personal experiences. They suggest that the term 'peer pressure' has gained a common currency in health education, which is loose, uncritical and even inaccurate. The dynamics of peer pressure in relation to smoking are almost certainly more complex than are usually acknowledged in the literature and may not be compatible with the assumptions that underpin most health education programmes. They reject definitions of peer pressure as one-way and coercive and assumptions about adolescents as socially incompetent and vulnerable. They support that the 'readiness to smoke' may be more relevant than assumptions about pupils succumbing to peer pressure against their will. This is similar to the concept 'intention to smoke', which has consistently been found to prevent smoking in the future. Findings strongly suggest that the idea of coercive pressure is largely constructed by health education and the media and finds an

echo in what pupils say and produce under certain research questions. This does not mean that peer pressure is totally absent, rather that by itself it is not a big issue for adolescents who have other much more urgent preoccupations that have to do with friends and peers, identity and group membership, gender and the opposite sex. Intention and readiness to smoke may well be shaped or even determined by these pressing needs.

1.5.4. School

Social-learning theory suggests that school and teachers and the staff in particular, can act as behavioural models, promoting smoking or anti-smoking images and examples. Nutbeam, Clarkson, Philips, Everett, Hill and Catford (1987) studied the health promotion, organisation and policy development in Welsh secondary schools. From a random sample of 81 secondary schools, 75 responded to the survey by means of a self-completion questionnaire. They suggest that: “within the school, policies and practices transmit ‘hidden messages’ to children, which can support or conflict with the normal curriculum - smoking by teachers, and the nutritional content of school meals are examples”. The vast majority of schools (93%) had a policy on smoking directed at pupils, which was usually both disciplinary and educational. Only one third of the schools had policies and practices addressing the subject of teachers’ smoking. Usually smoking by staff was restricted outside the staffroom, while only half of the schools specified that no teacher should smoke in the presence of children. The example of teachers who smoke may well undermine school-smoking education for pupils.

Davou (1992) researched the prevalence and the factors that influence adolescent smoking in Greece. The sample consisted of 1,552 students aged 12-13-years old, who attended twelve schools and were examined before and after the implementation of anti-smoking intervention from teachers, parents and adolescents within a period of twelve months. They completed a questionnaire, which included open-ended questions. The researcher suggests that the smoking habits of teachers and the degree of emphasis on the academic role of school differentiate the percentage of smoking students in schools. She claims also that although all other factors were controlled, the limitations posed by the causation inferred from correlation data should be kept in mind. It should thus be mentioned that the smoking habits of adolescents could be differentiated as a result of the diverse socio-economic level of the areas of the schools or the anti-smoking policy that exists in each school. It should also be examined whether in the school where the teachers were the active promoters of the anti-smoking intervention, they acted as a 'positive' influence, thus driving children away from the smoking habit. However, Davou does not provide adequate information on the evidence for her conclusions, so this makes it difficult to assess the validity of her statements.

Bewley and Bland (1977) examined social factors, which may influence boys and girls aged between 10 and 12½ years to start smoking. Information was obtained from 491 schoolchildren, their parents and teachers using self-administered questionnaires. They indicated that boys model their male teachers' smoking between the ages of eleven and twelve.

Murray, Kiryluk and Swan (1984) conducted the MRC/Derbyshire Smoking Study. A cohort of about 6,000 adolescents was followed up from 1974 when they entered secondary school at 11-12 years, until 1978 when they were aged 15-16. Each year the adolescents answered a questionnaire, which requested details of their smoking practices, social activities and attitudes towards various issues. Their parents answered a similar questionnaire when the children were aged 11-12 and 15-16 years old. In 1981 a short questionnaire requesting details of their smoking behaviour was sent to the adolescents that could be reached (at the age of 18-19). In 1974 and 1975 their schoolteachers answered a short questionnaire about their own smoking practices, while in 1974 and 1978 the headteachers answered a questionnaire about school organisation and their own smoking practices. Replies by teachers and headteachers in 1974 and 1978 were linked to form a number of school organisation variables. It was found that after allowing for the smoking practices of their families, the prevalence of smoking among adolescents still differed from school to school. A statistically significant association was found between the smoking prevalence of the girls and the smoking behaviour of their female teachers. It was indicated that girls model their female teachers smoking at the later ages of 18 and 19, long after most of the sample had left school.

Penny and Robinson (1986) administered questionnaires to 1,225 pupils in the second, third and fourth years of two secondary schools within an urban area of South Wales. They found that there was a significant association between teachers' smoking and the smoking behaviour of the students. They suggested that smoking should thus be forbidden not only on the school premises, but on

school journeys as well. Likewise, the Health Education Authority (1991) agree with the assumption that children are influenced to smoke by the example set by teachers. Staff working with young children are in a special position where they are often admired and seen as role models.

Moreover, Cooreman and Pedrizet (1980) carried out a large survey by means of a self-administered questionnaire to the 30,000 students who attended school in a French area. They examined some psychological aspects that influence adolescent smoking and the smoking teenagers' smoking habits were found to be associated with the school environment. Young people smoked more if teachers smoked in their presence than if they did not (according to the smoking policy regarding teachers, staff and pupils). It should be considered whether pupils smoke more simply because school regulations do not forbid smoking on the school premises, in which case there could be more variables involved in adolescent smoking than just the teachers' smoking behaviour (e.g. lack of intervention programmes, school smoking policy).

Porter (1982) studied two British boarding schools for boys with different disciplinary policies in respect of cigarette smoking. Questionnaires were sent to the young 'old boys' of each school to determine their smoking habits and most were returned. Boys go to school at the age of 13 and normally leave at the age of 17 or 18. They spend two thirds of each year at school away from the influence of their home. School 'A' allowed senior boys to smoke in their rooms with their parents' written permission 'as a concession to reality' but was 'firmly committed against the practice among junior boys'. School 'B' had a strict anti-

smoking policy applying to all boys. Punishments included 'extra work and disciplinary runs at inconvenient times' and sometimes corporal punishment for younger boys. In each school the disciplinary attitudes varied from house to house and during their time at school each boy was exposed at least once to an anti-smoking film and lecture. Significantly more young 'old boys' (senior boys), who had been to the less strict school smoked and this was consistent in each category of parental and older sibling smoking status and the effect of the school seems to have been confined to smoking or not smoking. The researcher argues that the two groups were similar in every way except their smoking habit and religion (school 'A' is Roman Catholic and school 'B' is a Church of England foundation). Religion, though, may be an important determinant of the smoking behaviour of the adolescents. Moreover, the fact that it was impossible to find another school with a policy similar to that of school 'A' suggests that this school might be rather exceptional and that this specialness might extend well beyond smoking, attracting a particular type of parent and pupil.

1.5.5. Knowledge

Another important issue in adolescent smoking is the knowledge regarding the negative consequences of smoking (tobacco) on health. It is argued that there is no need for further information, since the adverse consequences of cigarette smoking on health are widely known among adolescents. Surveys carried out by Eiser et al. (1987) show that young smokers can believe that smoking causes lung cancer and yet continue to smoke. Bynner (1969) in his study among young smokers found that 91 per cent of a sample of schoolboys aged 11-15 said that

smoking was a cause of cancer, including 79 per cent of those who were smoking one or more cigarettes each week.

One of the reasons why knowledge of facts may not appear to influence behaviour is that knowledge is not synonymous with understanding. Bewley and Bland (1977) examined the factors associated with the starting of cigarette smoking by British primary school children. They report that in a group of final year primary schoolboys, 86% of non-smokers and 76% of smokers agreed that smoking causes cancer, although 37% and 55% respectively thought smoking is not harmful. These findings suggest that at least some children do not know what lung cancer is, even though they agree that smoking causes it.

Bland, Bewley, Banks and Pollard (1975) studied schoolchildren's beliefs about smoking and disease. This research was part of a pilot survey for a longitudinal study of smoking by secondary schoolchildren. The sample was 595 children aged between 11 and 13 years, who were in their first year of secondary school at three comprehensive schools in Derbyshire. The children completed a self-administered questionnaire on smoking, respiratory symptoms, attitudes to smoking and knowledge about smoking and health. There were four open-ended questions related to health issues ("What do we mean by lung cancer, bronchitis, heart attacks and polio?") and a question asking whether each of a series of diseases was more likely to happen to people who smoked cigarettes. The answers to the open-ended questions were classified into four categories: "understands", "understands a little", "doesn't understand" and "can't classify". A sample of answers was classified independently by three physicians and one

statistician and a consensus classification was drawn up. This was used as the standard according to which the remaining answers were classified by the researchers. They found that many children who are experimenting with cigarettes do not appear to understand what is meant by warnings against lung cancer and other major diseases related to smoking or at least cannot express their understanding.

Lloyd et al. (1998) based on their study among secondary schools in the London and the Sussex area, suggest that adolescents have learned and are able to recall the effects of smoking on health. They also argue that it was clear from the examination of the qualitative data of their study that the recital of these medical outcomes has become ritualised for many teenagers. Moreover, regular smokers stated that they had come to 'switch off' from such messages, which they regarded as propaganda, preferring to trust their own knowledge of adult smokers who did not seem to be suffering from smoking-related disease. By contrast, teenagers' descriptions of the negative effects of smoking on appearance and social competence are more convincing. These effects were both more immediate than the threat of chronic diseases presented by medical 'authority' and more real because they were the result of the adolescent's own observations and experience. Prevention/intervention programmes should try to provide the adolescents with knowledge and stress the fact the consequences of smoking on health are not only distant ones. An adolescent may not be concerned about the long-term consequences of smoking, but the short-term ones are bound to have a bigger impact on him/her (Ingersoll, 1989).

Leventhal, Glynn and Flemming (1987) assessed the smoking beliefs and the presence of known smoking risk factors using interviews with a sample of 895 young urban people. Misinformation among the young people was widespread and those at greatest risk for smoking were the most misinformed. Although almost all the young people agreed with the simple statement that cigarette smoking “can injure or hurt the body”, many of them harbored misperceptions that would tend to undermine their appreciation of the health hazards involved in smoking. For example, misperceptions about the number of peers and adults who smoke could increase perceived pressure to smoke and the perceived safety of smoking (ie, through reasoning that ‘If everyone does it, it must be safe’). These misperceptions could be resulting from the need that exists to resolve the conflict that arises from ‘cognitive dissonance’.

Moreover, the personal and environmental factors that place these young people at risk for smoking apparently enhance an inaccurate view of the prevalence and social desirability of smoking. Botvin et al. (1992) found that adolescents who believed that half or more than half of all adults or peer smoked cigarettes showed the most smoking involvement. Those who believed that less than half adults or peers smoked were less involved. Falco (1992) suggests that: “Correcting the exaggerations about almost universal drug use among peers undercuts the perception that ‘everyone is doing it’ and frees the youngster from thinking he/she must smoke, drink or take drugs to be socially accepted”.

It should be noted that there is a bias in the assumption, often implicit, that what deters males from smoking will be equally effective in deterring females. A

prevalent myth among females is that health risks associated with smoking among men do not apply to them. Another principle to be incorporated into future smoking prevention programmes directed toward adolescent females would be to acknowledge the different reasons girls smoke (e.g, weight control, to appear sexy) (van Roosmalen et al., 1992).

1.5.6. Personality

Adolescents may have different personality features and needs that are satisfied to some extent by cigarette smoking. Young women who are under pressure to lose weight need an appetite suppressant. Mothers caring for a young family under very limited and isolated circumstances need on-the-spot relief from stress. Smoking, from a young person's point of view, may seem highly rational (Regis, 1990). Warburton et al. (1991) report that in a school based survey of over 10,000 adolescents in the U.K., it was found that young smokers predominantly attributed their smoking to the intrinsic rewards of smoking itself.

The rewards gained by adolescent smokers as described in the previously mentioned study by Lloyd et al. (1998) are the following:

- **Pleasure and paraphenalia.** Smoking can afford satisfactions for young people quite apart from the pharmacological effects and perceived stress reduction. It can be associated with the initiation and pursuit of relationships, particularly with the opposite sex and the consolidation of group membership, whether or not this leads to identification as a smoker. The activity and use of the paraphenalia associated with smoking

can be pleasurable: handling cigarette boxes, matches and lighter, lighting up, inhaling, exhaling and watching the smoke drift away, blowing smoke rings have all been identified by young and adult smokers alike as giving pleasure. One important satisfying function of cigarettes for young people is in the use and construction of time. Smoking has been referred to as a way to fill spare time, to pass time, to prevent boredom and to punctuate the day or other activities. The act of smoking can create a space for the smoker, a respite from other demands.

- **The release of stress and mood control.** Both smokers and non-smokers identify the release of stress as an important function of cigarette smoking. Non-smokers are less convinced about the efficacy of cigarettes in reducing stress and commonly suggest a placebo effect: "they think it calms them down so therefore it does". While the capacity of cigarettes to alter emotional states and moods is a commonly held belief, some adolescents are reluctant to acknowledge the existence of levels of stress in the lives of teenagers comparable to those of adults. They therefore dismiss stress as a viable or acceptable reason for adolescent smoking. Despite non-smokers' skepticism concerning the reality of stress in young smokers, both smokers and non-smokers offer a number of stressful situations for which smoking is a useful antidote. These include arguments with parents, exams, relationship problems, bullying and other problems at school. In the face of such problems, some liken the role of the cigarette to that of a listening friend, who 'wouldn't argue with you or tell you anything'. For some smokers, the association between cigarettes

and stress release is that smoking shifts attention away from the stressor, albeit temporarily, to the activity of smoking, thereby enabling the smokers to lose themselves in the activity.

- **Risk and rebellion.** It is the exact chance of being caught doing something of which authority disapproves that may lead to the adoption of a smoking identity. This function is often associated with other risky behaviours.
- **Social life.** As the child enters adolescence, he/she develops the capacity to think in terms of the self and to evaluate the others. This new-found ability refers to social cognition, which is defined as the thinking that people display about the thoughts, feelings and motivations of themselves and others (Shaffer, 1996). Prior to the adolescent period the child is not able to fully appreciate the psychological aspects of a person, such as their inner qualities, beliefs and characteristics. This progression means that the individual develops a self-concept that is increasingly abstract, psychological and coherent. Additionally, the adolescent has an increasing ability to be introspective and to assess and reflect on his/her personal characteristics. This has important implications for the adolescents' view of the social world and his/her place in it.

The association with a group of smokers is an important step in becoming a regular smoker. In this instance smoking is something that happens when a particular group gets together in a certain place. Some

people smoke in a group where it is the norm to smoke, but do not smoke in other situations. Young smokers are less likely to smoke alone, while older, more serious smokers are more likely to do so. Adolescents talk about the camaraderie associated with sharing the same behaviour with others and there is a suggestion of a degree of security to be gained from this. Smoking is also regarded as a way to establish relationships or initiate contact. In terms of relationships and intimacy, smoking is seen as help to bolster confidence in a group or one-to-one situation. It is valued for its capacity to initiate social contact and to facilitate bonding for both girls and boys. Individuality (the striving for independence in and/or thought action) has been recently demonstrated to be a very strong predictor and motivator of health behaviour. Individuality was found to be three times more important to smokers than non-smokers, compared to the social factors such as peer and image influences that were equally significant for both smokers and non-smokers. Motivators to smoke could be embedded within the adolescent process of development and that smoking may offer some youngsters a means of establishing a sense of personal identity and individuality (Lynch, 1995).

- **The use and construction of time.** Themes related to time are raised as reasons for smoking by both smokers and non-smokers. One of the themes relating to time was the identification of 'vacant' time as opposed to leisure time that is occupied with structured or regular activity. Smoking is often referred to as a way of filling in small parcels of 'vacant' time, or of avoiding the feeling of having nothing whatsoever to

do. Perhaps the most commonly used phrase is to 'pass time'. Smoking is seen as an antidote for boredom. The habitual nature of smoking means that cigarettes at particular times become scheduled parts of smokers' daily routines. At these times, smokers feel unfulfilled without a cigarette.

- **Smoking and the control of weight.** Adults often explain cigarette smoking in terms of weight control, claiming that smoking is an appetite suppressant. Body image is a highly salient aspect of adolescent identity especially as adolescence is a time of dramatic bodily changes. Relatively little is known about boys' body image concerns, but for girls, fears about gaining weight and striving towards the cultural idea of a thin body shape become increasingly important. This raises the question of whether girls, in particular, may view smoking cigarettes as a strategy for avoiding weight gain in the same ways as adults do. As expected, adolescent girls are much more concerned with thinness and weight than are adolescent boys. There are small but statistically significant associations between smoking and body image concerns. The statistical analyses suggest that concerns about thinness and weight are only minor factors influencing the smoking uptake of girls and a concern with physical attractiveness can be detected by statistical analysis but it is even less predictive of boys' smoking behaviour.

The creation of an image is a central component in adolescent development and identity formation. Within the process of identity

construction cigarettes are a tool with which teenagers may create and manage such images. Adolescents hold many and varied images of smoking in relation to themselves and to other people. These images are often contradictory and internally inconsistent. Overall, more negative images of smokers were described than were positive images.

Goddard (1994) in her study among secondary schoolchildren in Britain found that adolescent smokers are viewed as having poor academic performance and other unhealthy habits. Barton, Chassin, Presson and Sherman (1982) examined the social image factors as motivators of smoking initiation in early and middle adolescence. They administered questionnaires to non-smoking adolescents and asked them to choose between twelve pairs of adjectives, which discriminated between adolescent subjects' descriptions of typical smokers and non-smokers (e.g. good-looking-ugly, healthy-unhealthy, wise-foolish). It was found that adolescent non-smokers see smokers as having some positive admirable qualities, as well as many negative ones. The negative qualities were showing-off, not doing well at school, drinking a lot. Images of smokers encompassed an individual's physical appearance, psychological factors and social standing. Smoking was seen at once to be an individual act or statement and a symbol of group membership and belonging (Lloyd et al., 1998).

1.6. Prevention/Intervention programmes

Many intervention / prevention programmes try to reinforce the refusal skills of the adolescents, so that they can learn how to handle situations where they are

under pressure to accept an offer to smoke (Sussman, 1989). Elder and Stern (1986) suggest that the existing approaches to smoking intervention can focus on the modification of the social pressure to smoke by remediating interpersonal behavioural deficits through a skills-building approach to resisting pressure.

Lloyd et al. (1998) suggest that it should be taken into account, when the intervention / prevention programmes are planned, that there are different stages in the acquisition of the smoking behaviour and each one should be addressed separately. Mettlin (1973) argues that the extent to which interventions are effective in making young people see smoking in a less positive light varies according to the young person's stage of acquisition. For example, individuals in the precontemplation stage may benefit from strategies aimed at "inoculating" them against future peer pressure, since they have yet to be heavily influenced by the positive aspects of smoking. On the other hand, children in the action stage may gain from approaches dealing with assertiveness and social skills in order to help "combat" the perceived positive consequences of smoking. The stage at which subjects placed almost equal weight upon the pros and cons of smoking was decision-making. In other words, subjects in this stage are balancing the positive and negative consequences of smoking, while subjects in stages on either side of decision-making place greater emphasis on either the pros or cons. This suggests that adolescents in the decision-making stage may benefit from strategies aimed at problem-solving and decision-making.

By classifying students into the various stages, the differential effectiveness of specific prevention program components on children at different phases of

acquisition could be tested. This type of research could lead to the systematic selection of specific types of interventions, based on the individuals' stages of acquisition. This is essential, according to Krosnick and Judd (1982), since there is considerable reason to believe that the factors that motivate people to smoke are probably very different from those factors, which help perpetuate the habit. Thompson (1978) reports that there have been some attempts to change the negative image of smokers, which is presented in contrast to the positive image of non-smokers. So he suggests that we should take the task of altering the image of the juvenile smoker.

Developmental psychology contributes to our understanding of adolescent health-related behaviour in a number of ways. The internal context and external social context cannot, however, be separated, as they are inextricably linked and interact to produce the social cognition of an adolescent. The social influences are well documented and understood and represent the targets of much health education activity as in life skills programmes, teaching resistance skills, raising self-esteem and correcting social norms. The internal context in terms of development is often not recognised in health education initiatives that try to change or influence health behaviour, often failing to take account of the developmental needs of the adolescents. The important developmental needs would appear to be the need for experimentation and for expression of individuality. The peer group continues to be regarded by some health educators as a threatening influence in terms of health behaviour. Nonetheless, the peer group and identification with the group is vitally important for psychological health and development in adolescence. Teaching a youngster to reject the peer

group directly compromises the needs of the young adolescent with regard to psychological development (Scriven et al., 1998).

After a very careful revision of a significant number of studies the research hypotheses and aims of the present thesis have been shaped.

1.7. Aims and rationale of the thesis

The vast majority of studies on adolescent smoking presented and reviewed so far were conducted in the USA and in the UK. In the USA smoking is banned in almost all public places and smoking is not considered to be part of socially acceptable behaviour. In the UK, smoking is restricted in certain areas, cigarette advertising is very limited and the price of tobacco products are high, leading to an anti-smoking attitude. The Greek context, though, differs significantly.

In Greece, smoking is regarded as a socially acceptable form of behaviour, since smoking is allowed almost everywhere – even on school premises. Cigarettes are widely advertised, tobacco products are relatively cheap and sold legally even to minors. Cultivation and export of tobacco products is a major source of income for many Greek families, as well as for the Greek government.

Given the marked differences in the contexts of the societies that have been studied so far – it is of interest to examine adolescent smoking in the Greek context. The percentage of smoking adults differs significantly. In the USA, the proportion of smoking adults has decreased enormously during the last few

decades and there is also a decrease in the amount of UK adults who smoke. In Greece, on the other hand, the percentage of smoking adults has shown an increase, bringing Greece to the third highest in the world.

It is, thus, of interest to explore whether these differences are mirrored in adolescent smoking. It would be expected to find that many more adolescents take up smoking in Greece than in the UK or the USA. If this is not the case, then it could be assumed that adolescent smoking is influenced more by situational factors or factors that are associated with personality and not so much by social factors. This would indicate that experimentation with smoking – which is as far as most adolescents go – is behaviour that is associated with adolescence. Social factors may be more important in taking up smoking or not and may lead to the differentiation of smoking prevalence in different cultures and societies. Differences in the social context may also lead to differences in the smoking prevalence among the two genders. Since smoking in Greece is considered to be more appropriate for boys, it is possible that more boys than girls smoke, a finding that would be in contrast to the tendency identified in the literature of recent years in which girls smoke more than boys.

Various social (parents, siblings, peers) and personal factors (self-esteem, locus of control, anxiety) have been associated with adolescent smoking and studied in depth. They are usually examined separately and found to be important factors/predictors of adolescent smoking. Therefore, this thesis will try to explore the most prevalent social and personal factors simultaneously and to develop a model that incorporates information on the extent to which each of them

influences the adolescents' decision to take up the smoking habit or not. This will provide valuable information that can lead to a better understanding of the smoking phenomenon, which seems to be more complex and multivariate than initially thought. This may also account for the difficulty in implementing an effective antismoking programme, since each of these factors should be addressed both separately and in connection with the others.

Moreover, it will be possible to evaluate the theories that are prevalent in the area of adolescent smoking (such as those of social modelling, reasoned action, cognitive dissonance and stages) and to identify their strengths and weaknesses, drawing information on the evidence that is provided by the data of the thesis. In order to achieve this, adolescents will be asked questions about the situations in which they are offered cigarettes, as well as the reasons why they take up the offer to smoke or not. They will also be asked to name what they believe that smoking has to offer and what would lead them to the decision to start smoking in the future or not. This will provide a more coherent picture of the situational and personal reasons that lead an adolescent to the decision to remain a non-smoker or to experiment with cigarettes / become an occasional or regular smoker. Most adolescents are offered cigarettes many times in their lives, but they do not always respond in the same way and if they do, they may provide different reasons for their actions. All this information stresses the complexity of adolescent smoking and the need to create a model that will symbolise and describe this complexity.

The longitudinal nature of the data will allow us to test this model, by identifying the adolescents who change their smoking behaviour and unpicking the factors that contribute to these changes. It may, thus, be possible to examine the extent to which certain factors are merely associated with adolescent smoking and the extent to which they pre-date smoking and may therefore have a causal role. It will also be of interest to test the hypothesis put forward by other researchers as well, that adolescents who are not sure whether they will take up smoking in the future or not are more likely to do so.

It is also desirable to shed more light on the role that school and teachers – as its representatives – have on adolescent smoking. The role of the school has been under-explored in the literature, despite the fact that adolescents spend most of their time in school. School is often considered to be just an institution where adolescents go to improve their academic skills and increase their knowledge. It is also assumed that adolescents learn the facts about smoking and other health-related issues at school and that this knowledge can act as a protective factor against cigarette smoking. However, it is of interest to explore the extent to which this knowledge is truly understood rather than merely learnt in a fairly superficial way. If pupils know enough of the facts about cigarettes, maybe the focus of prevention programmes should target other issues as well and not just the provision of knowledge.

School is also a society that has to function by certain rules in order to be viable and effective. Here, adolescents are exposed to values and norms that reflect the values and norms of the wider society. In order to examine if, how and to what

extent these values and norms are embedded into the adolescents' way of thinking, they are asked to justify whether they think that pupils and teachers should be allowed to smoke on the school premises. It is expected that their answers will reflect the societal values and norms on adolescent smoking.

The adolescent is not treated as a passive recipient of the 'influence' that all these factors exert on his/her decision to experiment with cigarette smoking or not. Therefore, the adolescents are asked to express their own views of cigarette smoking in an effort to gather information that may prove valuable in designing a prevention/intervention programme, which is posed as one of the aims of this thesis. Drawing on the limitations of other implemented programmes and the collected data, it is desirable to make suggestions for the planning of a prevention/intervention programme, especially since there is no Health Education in the National Greek Curriculum. Moreover, the age, the gender and the current smoking behaviour of the adolescents must be taken into account, since they influence their perceptions of smoking and should be addressed in a smoking prevention/intervention programme.

2. METHODOLOGY

2.1. Design

The aim of this study is to examine the psychosocial factors that influence adolescent smoking. In order to attain this goal its design is both cross-sectional and longitudinal. Questionnaires were administered and interviews were conducted on two different age groups at the beginning and the end of the academic year.

The longitudinal element of the study offers the chance to study some developmental processes, such as the initiation of smoking and the transition from experimentation to occasional or regular smoking (Chassin, 1986). The benefit of the cross-sectional element is that relationships can be explored between variables at the same time. “Cross-sectional studies are thus useful in suggesting hypotheses and can rule out possible causes while relationships are not found. But they do not determine with certainty which comes first, smoking or the variables correlated with it” (Conrad, Flay and Hill, 1992). Rutger, Engels and Knibbe (1999) conducted a study aimed to assess how far associations between possible explanatory variables and smoking onset depend on the use of cross-sectional versus prospective designs. Data were analysed from a three-way 5-year longitudinal survey among 1063 secondary schoolchildren (12-18 years old). The cross-sectional analyses showed strong associations between explanatory variables and smoking behaviour. However, only 8% of the variance in change of smoking status from non-smoking to regular smoking over a period

of 5 years and 14% of the variance over a period of 3 years could be predicted by the model variables. Factors believed to lead to smoking may result from smoking or they may change quickly in ways that make them of low predictive value even though they may be important aetiologically. The rationale for the combination of both designs is that it is possible in this way to counteract their limitations – at least to some extent.

2.2. Sample

The sample consisted of all the first year in 6 schools - 672 pupils in total, 351 aged 12-13 years (mean = 12.6 years) and 321 aged 15-16 years (mean = 15.8 years). There were 341 boys and 331 girls. The 12-13-year-olds attended the first class of gymnasium and the 15-16-year-olds attended the first class of lyceum. These age groups were selected because the pupils were at a transitional period moving from one educational stage to the next, making thus the detection of external factors that may influence their smoking behaviour more likely. Since the smoking policy on the school premises seems to be slightly different for pupils who attend gymnasium and lyceum, it was of interest to see if these differences were reflected in the smoking prevalence of the pupils.

The pupils attended 3 gymnasiums and 3 lyceums in Athens (the capital of Greece). The schools were selected randomly in order to represent the three socio-economic regions of Athens. Two schools were selected from each of the three regions that are geographically determined, although the socio-economic variable is not considered to be a factor that influences adolescent smoking. This

is an assumption that is supported also by Davou (1992), who found that smoking among Greek adolescents is not differentiated according to their socio-economic status.

2.2.1. Smoking policy of the school sample

In Greek schools, health education is not part of the educational curriculum (Davou, 1992). Thus, in almost all the schools there were no anti-smoking / prevention programmes. In one of the schools, there was some anti-smoking promotion. Relevant videotapes were shown and professionals (doctors) visited the school during the academic year, gave talks and led group discussions regarding the hazardous consequences that cigarettes / tobacco have on health.

There are no official guidelines from the Ministry of Education as to how pupils who smoke on the school premises should be handled. It should also be mentioned that teachers and the staff are allowed to smoke on the school premises and very often in front of the pupils. Moreover, it is worth pointing out the fact that, as both teachers, staff and pupils acknowledged, pupils smoke on the school premises and in front of their classmates and teachers.

Self-report questionnaires were administered to the 672 pupils, who were then classified into four categories according to their answers to the questionnaires. These categories are based on their smoking behaviour and are as follows: a) non-smokers, b) those who experimented with cigarettes once c) occasional smokers and d) regular smokers. Pupils were randomly selected from each

smoking category (30 non-smokers and 40 pupils from the other three categories) and from each age group. This produced a sub-sample of 150 pupils, who were subsequently interviewed twice – at phase one and phase two. Sixty of them are aged 12-13 years old (mean= 12.8 years) and ninety are aged 15-16 years old (mean= 15.9 years). Sixty-eight are boys and eighty-two are girls.

Due to the fact that the researcher visited the school for many days, there was no attrition in the sample. All the pupils that participated in the study at phase one participated in phase two as well. The absence of a few pupils who were sick did not pose any problem, since they were contacted at a later time. It should be mentioned that not one pupil moved schools during the 7-month study period and this is usual in the Greek context. Pupils rarely move schools – especially during the academic year - unless there is a very particular reason.

The teachers and the head-teachers of the schools were interviewed as well. The sole aim of these interviews is to get information on the situation in Greek schools. The findings seem to validate the findings of other studies that teachers and pupils smoke on the school premises. The teachers inform the pupils on the facts about cigarette smoking if and when they are given the opportunity. There is no policy on how smoking should be handled on the school premises. Most teachers feel at a loss and they have asked for the inclusion of Health Education in the National Greek Curriculum.

2.3. Instruments / Procedure

In order to gather all the data that is essential for the exploration of the research hypotheses and aims of the study questionnaires and interviews were used in both phases.

2.3.1. Pilot studies

Two pilot studies were conducted. The first pilot study took place in March/April 1998 and was used for the development of the questionnaire employed at the first phase of the study. The second pilot study took place in January/February 1999 and was used for the development of the questionnaire and structured interview employed at the second phase of the study.

2.3.1.1. First pilot study

The first pilot study was conducted in March / April 1998 by the researcher. Data from 54 students and 30 teachers were gathered through self-administered questionnaires and interviews. Both teachers and students claimed that the research was very interesting and seemed willing to answer the questions that were posed to them. Teachers were particularly satisfied that they were included in this project and that they would be able to voice their concerns and views on the smoking situation in Greece and Greek schools in particular. The students and teachers that participated in the pilot study were from two schools in the area of Athens, to which the researcher had access.

Out of the 54 students who participated in the pilot study, 33 (61.1%) were boys and 21 (38.9%) were girls. The mean age was 15 years 2 months. The mean age for the boys was 15 years and 6 months and for the girls was 14 years and 6 months. The age targets of the thesis were 12-13 and 15-16 year-old students, so the mean age of the pilot sample was in between those two age groups.

No clarifications or alterations of the questionnaire were needed since the participants considered the phrasing of the questions to be very clear and explicit. The time needed for the completion of the self-report questionnaire (roughly 15 minutes) as well as for the conduct of the interviews (roughly 10-12 minutes) was calculated. The feedback from the pilot study was very interesting and helpful in the formation and modification of the research hypotheses and of the questionnaire for the second phase of the study.

According to the results of the analysis of the pilot study 74.1% of the students were never-smokers, 14.8% had tried smoking once, 9.3% smoked occasionally and only 1.9% smoked regularly. So the percentage of students who had tried smoking and/or were currently smoking was 26%. The adolescents who had experimented with smoking and/or were occasional/regular smokers seem to avoid revealing this fact to their parents. Only 21.4% of the participants shared this experience with their parents.

The majority of students did not seem to be influenced by the smoking behaviours and the perceived attitudes of their siblings, parents and friends. For example, although 64.8% of the students reported that their parents smoke, only

a small percentage of them had taken up or tried smoking. Also there were some students who had only a few or no friends at all who smoked, but they did experiment with or start smoking. So, it seems that these results do not fully support Bandura's social learning theory (1971).

When asked if they intended to take up smoking by the end of the academic year, 74.1% of the students answered that they did not intend to, 3.7% that they intended to and almost a quarter of them (22.2%) were not sure what they would be doing by the end of the academic year. Chi-square analysis showed that there was no significant association between their decision to take up smoking or not and their current smoking behaviour. The students were also asked to name the sources from where they derived information from, as far as the facts about cigarette smoking were concerned. They were allowed to name more than one source. Parents constituted the most popular source of information (53.8%), followed by mass media (10.3%), friends (11.5 %), other sources (10.3) and school (9%). These results indicated that more than half of the students relied on their parents for their health education, while their friends came third. The fact that school was named as the last resource was quite expected, since there was no official health education embedded into the curriculum.

Despite the disappointing reality that school did not provide students with information on the facts about cigarette smoking, half the students believed that they were well enough informed, 40.7% that they were very well informed and only 9.3% felt that they were not very well informed. The scores that they obtained in a set of 10 knowledge questions regarding the facts about cigarette

smoking that they had to complete confirmed these beliefs. The vast majority was very adequately informed, with only 7.4% being adequately enough informed. This could mean that the social resources and the fact that the sample was from an area where the families were still very close, made up for the lack of information in the school curriculum (Davou, 1992).

It was interesting also to see what the misconceptions that students had were, so that they can be addressed and 'corrected' with the help of a proper prevention/intervention programme. The most common misconceptions were that:

- There are no drugs in cigarettes.
- Smoking helps you lose weight.
- Cigarettes do not cause dependence.

Students were also asked whether they thought that they should be allowed to smoke on the school premises and justify their answers. The vast majority (81.5%) claimed that they should not be allowed to smoke on the school premises, 13% said that they should be allowed to smoke and 5.6% were not sure. The justifications they provided are quoted below:

Students should be allowed to smoke on the school premises because:

- It's their business and apart from informing them nothing else can be done. -It's a way of spending their time. - For many pupils smoking during breaks is a way of resting and getting away from the world of the lessons. - It's everybody's right. - A lot of pupils need it. - Each person makes his/her own choices and we have no right to interfere with his/her personal life.

The reasons for not smoking were based on personal rights and needs (addiction). Students should not be allowed to smoke on the school premises because:

- Smoking in school is the worst thing. I believe it's a challenge. - It would be like offering death to children and not preventing it. - It's a place that we should respect as pupils. - They are still under-age and they must not smoke. - It's not right. - Pupils who do not smoke get carried away this way. - We go to school to attend classes. - After smoking, they may start taking drugs, who knows? - It's bad for the body and other pupils pick it up. - Younger children are exposed to a bad example. Outside the school premises they can do as they please. - They influence the rest of the pupils and they do the same. - It's not nice and proper. - We go to school to learn. - They insult themselves since the rest of the pupils think badly of them. It's also a way to prevent smoking at school. - It's the place where pupils should be exposed to a good example. - It's just not good smoking at this age. - It's not proper. - They will tempt other children to smoke as well. - They will contaminate other non-smoking children. - They bother others. - It's not the best thing that can happen. - At school there should be order, and the correct order does not entail pupils smoking. - They should not smoke at least at school, so that they do not provide younger children with a bad example. - School is the place to learn and the pupil should not occupy himself/herself with things that may deprive him/her of it. - There are other pupils who do not smoke and they are bothered by the smoke or they imitate those who smoke. - Because they harm their health and they tempt their classmates to smoke. - They spend most of their time at school, so they will be forced to smoke less. - Because like this a lot of children get carried away, become curious and want to try smoking. - Because we are children and most of us are disturbed when we see other children smoke and destroy their health. - Of course they can act as they please, but since school is the place to get educated and not a coffee shop, it's not proper. - We must respect the school premises. - Those who do not smoke will get carried away. - It's not proper and they harm their health. - It's not right. - It's forbidden. - It's harmful. - At least not on the school premises. The first ban of smoking may turn pupils away from cigarettes. - It's not at all proper and particularly it's not good for their health.

The reasons provided for not smoking were based on harming the smoker's and other people's health, setting a bad example and respecting the place where they

go to be educated. Students were not sure whether they should be allowed to smoke on the school premises because:

- It is relevant to the dependence of each pupil on tobacco. If the pupil has decided to smoke, it's better to smoke a cigarette than to be led to withdrawal symptoms. - Each person is free to do as he/she pleases. - It depends on whether the pupil attends high school or lyceum.

Students were asked to express how they felt when they saw their teachers smoking on the school premises. Almost half of them (46.3) had a neutral attitude, an equally high percentage (44.4%) had a negative attitude and only 9.3% had a positive attitude to their teachers' smoking. Listed below are the justifications they presented for their answers:

The negative attitude was expressed by the statements: a) it bothers me and b) I'd rather they didn't smoke. The reasons they give were:

- I can smell their bad breath and it bothers me. - The smoke disturbs me and it is an ugly sight. - It is not the proper thing to do, since they harm themselves and those around them, since they make them breathe their smoke and when they smoke in the classroom. - Because it also harms those who do not smoke. - Because I do not like the smell and the teachers' behaviour. - Since I am an athlete smoke disturbs me immensely. - I do not like it. - It bothers me, because when they enter the classroom they smell bad. - Because teachers should provide us with a good example. - Because they harm their health and they give a bad example. - Because it is a challenge. Although it is forbidden to us, they can smoke. - Because I cannot stand the smell of the smoke. - Because smoking is bad for health. - Because smoke disturbs me and I am an athlete. - Because it seriously harms everybody's health. - Because their breath bothers me. - Because I have read that smoking is bad for health. Besides without their smoking habit, I think they would have a different character, but I can sympathise with them, because I believe that in order to smoke they must have their own problems. - Smoking is not good, because they damage their health. - Because smoking is bad for health. - Because what they do is bad for their health. I do not have any reason to tell them not to smoke. - Usually when I have formed a good opinion of someone and I see him/her smoking, I think that my initial impression was wrong. Of course it's their own business, but it kind of bothers me. - Because I believe that they harm themselves and it's not very good for their image. This does

not mean of course that smoking teachers are not good at their job. -
Because the pupils seeing the teachers smoking, they will do the same.

The neutral attitude was expressed by the statements: a) I don't mind and b) it's their business. The reasons they provided were:

- Because they are adults and they can do as they please. - Because it's not my concern. - It's their right to do what they want. - Even if I did mind, what could I do? - When they do not smoke in the classroom. - If they are aware of the fact that they may influence the pupils and indirectly encourage them to smoke and they do not mind, then it is entirely their own affair. - I cannot intervene. Each person is responsible for his/her own choices. - Because each person is responsible for his/her own actions. If he/she wants to smoke I do not mind. - If they want to smoke it's their own problem. - We cannot interfere with their personal life. - They are mature and conscientious enough to make their own decisions. - It's something they want to do. Although it is not good, it's up to them to decide what they want to do and why. - Because they do not harm me, but their health and their pocket. - Because I cannot, that is I do not have the right to tell them not to smoke. Besides they harm themselves. - The fact that teachers smoke is entirely their own problem since they can do what they see fit. - Because each person rules his/her life the way he/she thinks appropriate. - Because I do not interfere in other people's lives. - I do not like to interfere in other people's lives. - Because teachers are free to do what they want with their personal life. - Each person can do as he/she pleases. - Each person has the right to do as he/she pleases, since he/she is not harming the other person's freedom. - Because each person can judge for him/herself. - They can decide for themselves.

The positive attitude was expressed by the statements: a) it doesn't bother me and b) I approve of it. The reasons they provide were:

- They are adults and they can do as they please. - Most of them are old, so they are free to do what they want. - Because maybe one day I will be in their shoes. - The teacher is not just a teacher. He/she is a human being as well. Therefore, since we live in a democratic country, every human being is free to do as he/she pleases, without disturbing his/her fellow citizen. - They are adults and they make their choices and I do not have the right to interfere with them.

The students were also asked if teachers should be allowed to smoke on the school premises and why. Half of the students said that teachers should not

smoke on the school premises, a quarter that they should and the rest (25.1%) were not sure. The students seemed to be less 'strict' with teachers smoking on the school premises that they were with students smoking on the school premises. The justifications that they presented for their answers are as follows:

Teachers should be allowed to smoke on the school premises because:

- It is a habit which is difficult to quit and when someone does not smoke for a long time he/she becomes nervous. - People who smoke 'need' tobacco. And since it is a drug, it is more preferable to have it than experience withdrawal symptoms and take it out on the students. - Because whether they smoke or not is their problem, especially if they have one room for the smokers and one room for the non-smoking teachers. - I have heard that once you begin smoking it is difficult to quit. However, there should be a special area in the school for them to smoke. - Because there are special areas where they can smoke and I do not think that they are a bad example for the pupils. - Because they are adults. - Because a teacher who smokes cannot wait six hours for the school to be over. - Because they are adults. - Because they cannot last that long without cigarettes. - Because after so many hours of work a cigarette is good.

Teachers should not be allowed to smoke on the school premises:

- Because they do not come to school to smoke but to teach. - Because a lot of pupils are encouraged and they do the same. - Because pupils learn how to smoke from teachers and we, who are going to high school for the first time are exposed to a bad example. - Because teachers should set a good example for the pupils and besides it is not good for their health. - Because they set a bad example for the students. - Because they make a bad impression. - Because when teachers smoke, children get carried away and smoke themselves. - Because it would bother a lot of pupils and the lesson time is not a break time for the teachers. - They set a bad example for younger children. - They set a bad example for children. - Because it is a school and they would provide a bad example for students. - Because like this some students get carried away and start smoking. - Because they may mislead some pupils. - Because younger children who see them smoking will want to take up smoking as well. - It would disturb all the non-smoking pupils. - It's not right. - They do not respect us. - They bother most children. - They encourage children to smoke. - Adults constitute an influential model for younger people. - Because it's a challenge if they can smoke and we cannot. - Teachers should be a model of mentally and physically healthy people. That is why

smoking, at least on the school premises is negative. - Pupils are influenced. - Since teachers are supposed to prevent you from taking up a bad habit, how can a pupil who sees his/her teacher smoke do the right thing? - The teachers' behaviour is often imitated. So they must set a good example. - They should be allowed to smoke only in the staff room.

Students were not sure whether teachers should be allowed to smoke on the school premises because:

- They should set a good example, but on the other hand school is not a jail, where people cannot do what they want. - It's their own business, but they set a bad example. - They should smoke only in the staff room not in the classroom. - Each person can do as he/she pleases. - The smoke may disturb some pupils. - They should be allowed to smoke only in a special room and nowhere else. - Smoking is a bad habit, which is very hard to give up. - Since they want to. - They disturb the children. - Children have the tendency to imitate the behaviours they are exposed to. But since we are free people we do not have the right to tell others what to do. - I am not sure that the fact that they smoke will influence children to start smoking as well.

The results from the interviews with the teachers shed some more light on how they view smoking in general and on the school premises in particular, as well as their role as models and their responsibilities as far as the updating of the students is concerned. The interviews were all held in a very friendly atmosphere and the teachers were very willing to help, volunteering their opinion and experience on what is going on in Greek schools. Half of the interviewed teachers were smokers. The vast majority of teachers (81.3%) admitted that by smoking on the school premises they set a bad example for the students, because:

- The smoker, regardless of who he/she is (teacher or parent), sets a bad example for the children. - The teacher is always a model for the pupils.

One teacher said that he did set a bad example, but he was not sure that it would make any difference if the students had already decided to smoke. Finally, 12.5% claimed that they did not set a bad example because:

- Children nowadays are aware of the consequences of smoking. If they want to they will try it, no matter whether they see a teacher/parent smoking or not. If they do not want to, they will not approach it. Of course, I do not think that the teacher-smoker is a positive model, but it is not the case that the pupil seeing the teacher will be influenced to the extent that he/she will try to smoke because the teacher does. - The role of the family is basic and so is the child's upbringing in it. All the other factors come later.

Despite the fact that they actually acknowledged the bad example that they set to the students, almost two thirds of the teachers (69%) said that they smoke or would smoke on the school premises. The majority said that they did/would not smoke in front of the students, but in their office, during breaks and on school journeys. In Greece, though, all students have free access to the staff at any time, so smoking in the office does not exclude being seen by the students (Davou, 1992). It has been shown also by Kannas (1983) that the credibility of health education is undermined in pupils' eyes by the right of the teachers to smoke in school.

All teachers were very firm in their belief that students should not be allowed to smoke on the school premises, although they did admit to the existence of a special place where students smoke during breaks with the staff's knowledge. The reasons they provided why students should not smoke on the school premises were:

- Because even if students smoke, they avoid smoking for many hours - Because school must not become a place where smokers are educated and encouraged.

The teachers were asked what they would do in the case that they caught a student smoking. As Toundas (1985) states there are no state regulations as to what the teacher should do, so it is usually up to him or the head to decide. The answers they gave were the following:

- With leniency, consultation and in no case with suspensions, since they will not deter the pupil from smoking. - With suspension. - With understanding. - By forbidding it. - With understanding and proper updating. - Punishment after warning (if repeated) and since it is forbidden. - With criticism and reprimands/punishments. - With discussion and updating. - The pupil should be thoroughly informed of the harmful consequences of smoking. - With good advice to quit smoking. - With recommendation and updating of the harmful effects of smoking. - With discussion and informing of the harmful consequences of smoking. - The same as above and with the recommendation to avoid smoking at school. - By showing him/her a picture of how his/her lungs will be in a few years time. - Trying to convince the pupil that smoking is not good for him/her and to stress that smoking is forbidden on the school premises. - The state has tied our hands in this matter, so I cannot react.

Punishment or consultation were the two main solutions proposed to handle a student who has been found smoking. Most teachers claimed that they did inform the pupils of the reality of smoking and its consequences whenever they were given a chance. One teacher actually said that: "I make sure as a smoker that I talk to the students about the negative consequences of smoking, which I am already facing and the dependence that it causes. Indeed, I have succeeded although I am a smoker, to deter a lot of pupils from smoking, knowing directly the bad consequences of smoking". Some teachers said that they offered information only when they were asked or given a chance. There was only one who claimed that he did not feel it was necessary, since: "I teach at high school and there are no cases of students smoking, at least in my school".

Since there is no health education in the Greek curriculum, students have to rely on teachers' own initiative to learn the facts about smoking or other health issues. Although teachers seem willing to volunteer their knowledge, they claimed that they did not always feel adequately informed, especially on most recent developments, to provide valid information to the students. This problem was also spotted by Velonakis et al. (1984), who reported that even when health education is implemented in some schools, as a staff's initiative, it has a very small chance of being successful. It usually lacks co-ordination and is based on old and long-forgotten teaching methods, which are characterised by lack of imagination and sensitisation to crucial psychosocial variables.

Most teachers admitted to these weaknesses in health education, but there seemed to be quite a lot of them (62.5%), who believed that students were adequately informed about cigarette smoking. Some of the reasons they gave to justify this view were that: "Most of them are athletes" or "There are relative campaigns from the Ministry of Health on TV and it is widely known that smoking is responsible for lung cancer". Other teachers, though, felt differently: "If they knew enough they would not smoke. There is no proper consultation about it. Despite all this, most of them smoke in order to show that they are doing something" and "Nobody knows all the facts and even if he/she knows them, he/she does not believe them".

This pilot study confirmed the picture about the reality in Greek schools, which was presented in other studies. The situation in the schools was described by the words of the pupils and the teachers that participated in the study in question.

The results from this pilot study were used to construct the questionnaire and the semi-structured interview that was employed in the main study and it provided the necessary background for the development of the pilot and the instruments for the second part of the study. Moreover, it was used to check the instruments and the feasibility of the exploration and the examination of the issues in question.

2.3.1.2. Second pilot study

A pilot study with the participation of 40 pupils was carried out in an effort to assess the clarity and appropriateness of the questionnaire/semi-structured interview that was used for the second phase of the study. Half of the pupils were aged between 12 and 13 and the other half between 15 and 16 years old. Most of these pupils participated in the pilot study of the questionnaire in the first phase of the data collection. It was not necessary to make any changes in the phrasing or the order of the questions. There was some difficulty for some of the younger pupils in understanding the concept of 'socially acceptable behaviour'. This difficulty was taken into consideration and a verbal clarification of the term was provided to the pupils before they began to complete their questionnaire.

2.3.2. Instruments/Procedure at phase one

Self-report questionnaires (Appendix 1) were administered to the 672 pupils attending the selected schools. They were developed after careful examination of the questionnaires used in other studies and consideration of the issues to be

explored and following the pilot study that is described later on. The questionnaire included demographic information (i.e. the name of the school, the class, the gender, the age and the date of birth of the participant). The young people had to identify their smoking behaviour by selecting one of the following 4 categories: non-smoker, experimented with cigarettes once, occasional smoker (less than eight cigarettes per week) and regular smoker (more than eight cigarettes per week). It is essential to provide a clear measure for the reporting of smoking behaviours, so that there is no under-reporting or over-reporting of smoking. This is also stressed by Fergusson et al (1995), who found that although over 95% of non-smokers and regular smokers correctly reported their smoking behaviour, the reporting accuracy of occasional smokers was poor – with almost 40% making false negative responses, which resulted in their being classified as non-smokers. This may be due to the fact that this group has an ambiguous status, since its members are neither committed smokers nor committed non-smokers. A suggested way of improving the reporting accuracy of occasional smoking may be to specify the exact amount of cigarettes for the reporting of occasional smoking. This is the reason why in the specific questionnaire it was clarified that occasional smokers were the ones who smoked up to eight cigarettes per week. This specification will significantly decrease the possibility of misclassification of occasional smokers.

The participants were asked whether their parents, siblings and friends smoke. The purpose of these questions was to help test the hypothesis put forward by Bandura (1977) that significant people act as behavioural models. Furthermore, questions were asked on the perceived attitudes of parents, friends and teachers

towards the adolescents' smoking. In cases where they smoked, they were asked if they had informed their parents. These questions addressed the issue of whether attitudinal (Ajzen and Fishbein) factors were related to the adolescents' smoking behaviour. It could be argued at this point, that since the reports on parents', friends' and teachers' smoking status and approval/disapproval of smoking came from the respondents, there might well be an element of rationalisation and misperception by respondents, resulting from the attempt to justify their behaviour by reference to the behaviours and attitudes of the others. The evidence suggests that although not perfectly correlated, there is good correspondence between social influences and perceptions (Kandel, 1980; Hatzianeou, Pearce, Fiore, Grise, Novothly and Davis, 1989; Newcomb, Brady and Hartup, 1979). Moreover, how others are perceived seems to be more directly important than their actual attitudes in determining smoking behaviour (Morgan et al., 1991). Bauman and Fischer (1986) suggest that subjects' reports on friends' behaviours reflect what subjects believe their friends do and this is more fundamental to influence and selection than what friends actually do.

Adolescents were asked how they feel when they see their teachers smoking on the school premises, and if they think that teachers and students should be allowed to smoke on the school premises. The information from these questions could provide some insight into the role of school, teachers and pupils in the Greek society. They were also asked to name the sources of information regarding the facts about smoking and whether they thought that they had adequate information/knowledge or not. All these questions gave valuable information on how pupils view smoking and relevant issues, such as who

delivers knowledge on smoking in a curriculum that lacks Health Education. The knowledge of the facts about smoking was tested as well, by a short questionnaire on statements about smoking that students had to label as true or false. These statements were formed on the basis of the information that was presented in a leaflet regarding health issues that was distributed to pupils on the occasion of the 'National Day against Cancer'. This was an initiative of the Ministry of Health and not of the Ministry of Education.

The questionnaires were completed in the presence of the researcher, while the teacher was asked to leave the classroom. The researcher stressed that all information was confidential and to further ensure this, the questionnaires were anonymous. The participants were asked to complete them carefully, honestly and to make sure that they answered all the questions. Then they were instructed to place them in the envelope provided and to seal them before they handed them back to the researcher. They were allowed to ask for clarification, if there was something that they did not understand.

Goddard (1990) used a similar procedure to ensure that the information offered is honest. Some researchers (Sussman, Dent, Mestel-Rauch, Johnson, Hansen and Flay, 1988; Evans, Hansen and Mittelmark, 1977) argue that self-reports are not very valid methods of collecting data. Single, Kandel and Johnson (1975) conducted a study to examine the validity of self-reports and they found that they are a reliable measure of attitudes and potential sources of errors have repeatedly been shown to be insignificant.

Subsequently, the pupils were classified according to their self-reports into four groups according to their smoking behaviour. A number of participants (150) were randomly selected from each category (60 from the gymnasiums and 90 from the lyceums) to be interviewed. This difference in the number of interviewed pupils between the two age groups was due to the lack of a significant amount of occasional and regular smokers in the younger group. Since the questionnaires were anonymous they were identified on the basis of their school, class, gender and date of birth.

The researcher used a semi-structured interview (Appendix 2) in order to obtain the desired information. The confidentiality and anonymity of all the answers was stressed one more time. The main aim of these interviews was to check the validity of the answers offered in the questionnaires and to obtain more information on some of these answers. To ensure the anonymity of the interviews it was forbidden by the schools to use a tape recorder. So, the researcher wrote down the answers on the interview sheet in the allocated space. Each interview did not last more than 10 minutes due to time restrictions posed by the school. The data that was gathered for every participant was limited in terms of amount and detail due to the above mentioned restrictions. The interviews took place in a small office that was isolated from the classrooms and the teachers' offices. Overall, the participants seemed willing to answer the questions and the correspondence between the questionnaires and the interviews was very good (96.3%).

The pupils were informed that their answers would remain confidential and that they were randomly selected. They were asked to state their current smoking status and their answers fell into one of the above mentioned categories of the classification, which was used in order to examine the differences of knowledge, attitudes and experiences of the adolescents who were at different stages of smoking onset. Friedman, Lichtenstein and Biglan (1985) used a similar classification, since differences in the situations of those who did smoke and those who did not would point to possibly critical situational and motivational factors that prompt initial smoking. Similarly, if the initial smoking situations of those who persisted in their experimentation differed from those adolescents who stop after having tried one or a few cigarettes, it could be that the nature of these first experiences which influences subsequent experimentation. Thus, these comparisons should delineate the situational characteristics, which may be present at the different stages of smoking.

In the present study, the adolescents were asked under which conditions they were offered cigarettes in an effort to gain an insight into what really happens during the experimentation phase. They stated what made them accept or decline the offer to smoke. This information could prove to be valuable in detecting and reinforcing the protective factors against adolescent experimentation with smoking. There are some researchers who claim that adolescents gain something from smoking, which is why they continue to do it. So, the participants were asked what they thought that smokers derive from smoking. A prevention/intervention programme should aim at offering possible alternatives for achieving the positive desirable outcome. Finally, they were asked why

pupils and teachers should or should not smoke on the school premises. Their justifications provided some indication of the rights and obligations that pupils, teachers and schools have and were linked with the context of the wider Greek community and mentality.

Teachers and headmasters – a total of 120 – were interviewed as well (Appendix 3) in an attempt to get information on how they view smoking by pupils and how they deal with students who smoke, whether they provide adequate information on the facts about smoking and whether they do it on their own initiative or whether it is part of the school curriculum. They were also asked whether they smoke on the school premises and in front of the students and whether they think that by doing so they set a bad example and why. These interviews were used only to give an indication of the situation in the Greek schools and thus, will not be analysed, in any depth.

2.3.3. Instruments/Procedure at phase two

The adolescents questioned in Phase One were revisited in the second phase of the study. They were all asked to complete a self-report questionnaire and the same 150 who were interviewed in Phase One were interviewed in Phase Two as well.

The self-report questionnaire (appendix 4) that was used was different from the one administered in the first phase. It was designed so as to expand on some of the questions in the first questionnaire and to obtain some additional information.

At the beginning, the pupils were reassured that the questionnaire was confidential and they were thanked for their participation. Then they were asked to state their school, class, age, date of birth and sex. Since the questionnaires were anonymous this information was useful to match the respondents' answers in the two phases of the study.

The pupils were asked about their smoking behaviour. According to their answers it was possible to detect any changes in the pattern of their smoking behaviour during the academic year. The pupils who changed their behaviour during the academic year constitute a group that was examined with particular attention, since it can provide valuable information on the factors that influence the transition from one smoking stage to the next.

Then the participants were asked how they thought that their parents, friends and teachers/headmaster would react to their smoking. These questions were not open-ended. The pupils had to choose among a number of reactions/categories that had been presented to them. These reactions were shaped after the qualitative analysis of the results of the pilot study and with the help of a psychologist who reviewed and validated the proposed categories. The aim was to provide more accurate information on how pupils perceived the reactions of other important people in their lives. They gave a more specific idea of what happens than the previous categories. So, if the answer was "my parents will cut my allowance" it was more specific than "they would try to stop me anyway they could". The pupils always had the opportunity to circle the option "other" and

expand on what they were referring to, so that even more information could be derived from these questions.

The pupils said whether they thought that they had learned more about smoking and from whom, so that it could be established whether there was any kind of Health Education in the schools. They were also asked if they had any questions/queries regarding the facts about smoking. The answers to this question indicated which were the issues that must be clarified and addressed in an anti-smoking prevention/intervention campaign. In order to gain more insight, the participants mentioned the issues that should be stressed in an anti-smoking campaign. This provided an additional indication of the aspects of health education that appeal to them. They were also asked to nominate the most appropriate person to teach health education in the school environment.

The pupils had to state if smoking is a socially acceptable form of behaviour or not and the answers may shed some light on certain aspects of the theories of “reasoned action” and “cognitive dissonance”. They were also asked whether they saw themselves smoking in the future and if yes, under which circumstances.

As for the interviews, the same questionnaire was used (Appendix 4) and more emphasis was placed on the depth of the answers to the open-ended questions. The time for the interviews was restricted, since only 10 minutes were allocated to each interview and the use of a tape recorder was not allowed.

2.4. Procedures used for the analysis of data in the main study

Due to the nature of the data (nominal and ordinal) analyses relied mainly on cross-tabulations. From the cross-tabulations a contingency table with information on the row, column and total percentages was obtained. Likewise, any possible association between nominal variables can be ascertained.

In order to determine the presence of an association between two nominal variables the *chi-square* test was used. Although the chi-square test establishes the existence of a statistical association, it does not provide a precise measure of the strength of the relationships underlying the overall statistically significant finding. So, when the association between two variables was statistically significant, the contingency table was used to interpret the nature of the association.

Since the nature of the data was ordinal, it was possible to use some additional statistical tests to further explore it. So, Spearman's Rho Correlation and Kendall's Tau were the two non-parametric tests that were employed to examine the correlation in the change of the smoking behaviour between the two phases of the study.

The Wilcoxon Signed-Rank Test was used to compare age and smoking behaviour in the participants, who were the same for both variables. Finally, log-linear analysis was used to examine whether the age or the smoking behaviour of

the participants was the most important predictor of their attitudes towards teachers' and pupils' smoking on the school premises.

Due to the length and the nature of the qualitative data, it was not appropriate to use grounded theory, which is designed for longer and more in-depth interviews. Therefore, the data that was derived from the interviews was used to elaborate on the quantitative data. All the answers to each question were recorded and then categories were formed. These categories were used to expand on the quantitative data. They offered the participants' perspective on many issues and were used to construct the second questionnaire and structured interview. A second independent psychologist looked at all the interview data and formed a set of categories similar to the one devised by the researcher. There was also good agreement on the assignment of responses to categories. It should also be mentioned that the interviews were used by the researcher as means of 'sketching' the profile of the non-smoking, experimenting, occasionally and regularly smoking adolescent.

3. RESULTS

The aim of this chapter is to offer an analysis and presentation of the data of the study in question in a clear and concise way. The data was collected in two phases - at the beginning and the end of the academic year 1998-1999 (September 1998 and May 1999). It is analysed and presented so that it will facilitate the examination and the exploration of the research aims that are stated at the end of the introductory chapter.

3.1. Smoking prevalence and age

It is useful to know how many pupils smoke in order to correct misperceptions that everybody smokes. It is also known that the younger someone starts smoking, the more health problems he/she will face later on. It is, thus, important to identify the 'at risk' adolescents and try to intervene before it is too late, since it is widely acknowledged that prevention is better than cure. The association between smoking prevalence and age is examined and the results are the following:

3.1.1. Overall Smoking Prevalence

In the first phase of the questionnaire sample, it was found that 71% of the sample had never smoked, 14% had tried smoking once, 9% were occasional smokers and 6% were regular smokers (mean age = 13.6 years). The results of

the second phase (7 months later), where the pupils were questioned again, indicate that there had been a quite significant increase in the amount of these pupils who smoked. In particular it was found that 60.6% of the pupils had never smoked, 18.6% had tried smoking once, 10.7% were occasional smokers and 10.1% were regular smokers. This increase, which is shown in Table 1., is significant according to the results of the Wilcoxon Test ($z = -9.49$, $p < .001$). This increase is indicative of changes in smoking behaviour that take place in the course of the academic year, which are explored in this study through a variety of questions targeting different aspects of the behaviour.

Table 1. Percentages of pupils' smoking behaviour during phases one and two of the study

Pupils' Smoking Behaviour	September 1998 (N = 672)	May 1999 (N = 672)
Non-Smoker	71%	61%
Smoked Once	14%	19%
Occasional Smoker	9%	10%
Regular Smoker	6%	10%

3.1.2. Smoking Prevalence in 12-13 year olds

There was an increase in the smoking behaviour of 12-13 year olds. To be more precise, in the first phase, it was found that 91.5% were non-smokers, 7% had tried smoking once, 1.5% were occasional smokers and only one adolescent was a regular smoker. In the second phase (7 months later) there was an increase in the amount of students who had experimented with smoking or became occasional/regular smokers. Among the 12-13 year olds, 79.7% were non-

smokers, 14.8% had tried smoking once, 4% were occasional smokers and 1.4% were regular smokers (Table 2). The percentage of the occasional and regular smokers in this age group had more than tripled - from 1.7% (Phase One) to 5.4% (Phase Two). Some increase is to be expected given the fact that pupils were 7 months older at phase two. There is a significant correlation between smoking at phase one and phase two. Pearson correlation between the two sets of ranks is 0.544. However, although the correlation is significant it is only of a moderate size, indicating that there is quite a lot of change in smoking status occurring in the 7 months between phases.

3.1.3. Smoking Prevalence in 15-16 year olds

The smoking habits of the adolescents aged 15-16 changed considerably over the two study points as well, probably due to the elapse of 7 months between the collection of the two data sets. In phase one, nearly half of the pupils were non-smokers (49%), 22.4% had tried smoking once, 16.8% were occasional smokers and 12.1% were regular smokers. In phase two, the figure for non-smokers dropped to 40%, 22.7% had tried smoking once, 18.1% were occasional smokers and 19.6 % were regular smokers (Table 2). The Pearson correlation between the two sets of ranks is 0.883. It should be noted that the value of the Pearson correlation in 15-16 year olds is much higher than in the 12-13 year olds, indicating greater stability.

It could be argued that the difference in the smoking prevalence between the age groups, which is statistically significant both in phase one ($\chi^2=156.84$, $df = 3$,

$p < .001$) and in phase two ($\chi^2 = 136.37$, $df = 3$, $p < .001$) indicates that age is a significant factor in smoking behaviour during adolescence. The same conclusions are reached when the Wilcoxon Test is used to explore the relationship between age and smoking behaviour in phase one ($z = -3.97$, $p < .05$) and in phase two ($z = -6.68$, $p < .001$). A careful examination of Table 2. demonstrates and confirms the importance of the implementation of prevention programmes as early as possible, since very significant changes in smoking behaviour take place during this period of pupils' lives and become more stable with age.

Table 2. Percentages of pupils' smoking behaviour by age during phases one and two of the study

Pupils' Smoking Behaviour	12-13 years old (N=351)		15-16 years old (N=321)	
	Phase One	Phase Two	Phase One	Phase Two
Non-Smoker	91.5%	79.8%	48.6%	39.6%
Smoked Once	6.8%	14.8%	22.4%	22.7%
Occasional Smoker	1.4%	4%	16.8%	18.1%
Regular Smoker	0.3%	1.4%	12.1%	19.6%

An analysis of Table 2. seems to indicate that there is a substantial increase in the number of regular smokers in the 15-16 year-olds. They appear to go straight from non-smoker to regular smoker, which does not appear to be the case in 12-13 year-olds. Further analysis is required in order to explore this finding. It is found that 132 pupils (20%) – 54 aged 12-13 and 78 aged 15-16 - have changed their smoking behaviour during the academic year. The exact nature of the changes is recorded and presented in Table 3.

Table 3. Changes in the smoking behaviour of 12-13 and 15-16 year olds during the academic year

Age	Changes in Smoking Behaviour						
	non-smoker to smoked once	non-smoker to occasional smoker	non-smoker to regular smoker	smoked once to occasional smoker	smoked once to regular smoker	occasional smoker to regular smoker	regular smoker to occasional smoker
12-13 years old	39	7	1	4	2	1	0
15-16 years old	29	6	1	17	4	20	1
Total	68	13	2	21	6	21	1

This table shows that the increased number of regular smokers at the end of the academic year is due primarily to a transition from occasional to regular smoking and not from non-smoking to regular smoking as could be deduced from Table 2. This finding supports the theory of stages. It seems that a substantial amount of 15-16 year-olds move from non-smoking to experimentation with smoking and occasional smoking. As for the 12-13 year-olds who change their smoking behaviour, most non-smokers experiment with smoking and a few change from non-smoking to occasional smoking. It is also note-worthy that one 15-16 year-old reports a decrease in his smoking behaviour – only one in a fairly large sample size. There are, though, 10 more pupils who decreased their smoking and are still classified as occasional smokers, since they smoke less than eight cigarettes per week, but they do smoke less than they used to. This is a limitation of the instrument used, which can be partially counteracted by the interviews. The participants of the study who changed their smoking behaviour over the academic year will be the focus of a separate section in this chapter.

3.1.4. Smoking Prevalence in the sub-sample of pupils who are interviewed

As described in the Methods section, a sample of pupils who completed the questionnaire were interviewed in greater depth. The sub-sample was selected on the basis of the smoking behaviour of the participants. All the pupils who completed questionnaires were grouped into four categories – non-smokers, smoked once, occasional and regular smokers – according to their smoking behaviour. Then there was a random selection of participants from each group. So, out of the 672 pupils who participated in this study 150 (68 boys and 82 girls) are interviewed. There were 60 pupils (40%) aged 12-13 years old and 90 pupils (60%) aged 15-16 years old.

Table 4. Percentages of interviewed pupils' smoking behaviour during phases one and two of the study

Pupils' Smoking Behaviour	Interviewed Pupils (N=150)	
	Phase One	Phase Two
Non-Smoker	32%	25%
Smoked Once	29%	28%
Occasional Smoker	23%	20%
Regular Smoker	16%	27%

The smoking prevalence of the interviewed pupils is described at this point, as the quantitative analysis is interwoven with the qualitative data.

3.2. *Smoking prevalence and gender*

In some countries (e.g. Britain and the USA) it has been found that more girls than boys are smokers. However, in this study there is no statistically significant relationship between the smoking behaviour of the participants and their gender – phase one ($\chi^2=7.07$, $df=3$, $p>.05$) and phase two ($\chi^2=3.89$, $df=3$, $p>.05$). There is a tendency, though, for boys to smoke occasionally or regularly more than girls do – 19% and 12% respectively in phase one and 23% and 19% respectively in phase two. This difference in the smoking behaviour according to the gender of the pupils occurs in both age groups and in both phases (Table 5).

Table 5. Percentages of pupils' smoking behaviour by their gender during phases one and two of the study

Pupils' Smoking Behaviour	Girls (N=331)		Boys (N=341)	
	Phase One	Phase Two	Phase One	Phase Two
Non-smokers	71%	71%	60%	61%
Smoked Once	17%	11%	21%	16%
Occasional Smokers	7%	11%	9%	12%
Regular Smokers	5%	7%	10%	11%

3.3. *Smoking Prevalence and Parents*

The literature cites evidence both in support and against the influence that parents may have on the smoking behaviour of their children. There is usually a distinction between the smoking behaviour of the parents and their perceived

reaction towards their children's smoking. They are believed to have a different impact on children's smoking behaviour. This distinction is made here.

3.3.1. Influence of parental smoking behaviour

Parental smoking behaviour does not seem to constitute an influential factor on adolescent smoking, although there are some children who do copy the smoking behaviour of their parents. Specifically, it was found that the relationship between parental smoking behaviour and the smoking behaviour of their children is not statistically significant ($\chi^2 = 4.78$, $df = 3$, $p > .05$). Although many parents are smokers (62%), often their children do not smoke (Table 6).

Table 6. Percentages of pupils' smoking behaviour by the smoking behaviour of their parents

Pupils' Smoking Behaviour	Smoking Parents (N=419)	Non-Smoking Parents (N=253)
Non-smokers	70%	73%
Smoked Once	14%	15%
Occasional Smokers	9%	8%
Regular Smokers	7%	4%

This tendency could be caused by the fact that these children are exposed to a live example of the negative consequences that smoking has on health. This is evident in the words of some of the children who are interviewed. A 12-year old non-smoking girl says that: "my attitude towards smoking is negative and will remain so, because my father nearly died of heart problems that were caused by his smoking". Another 12-year- old non-smoking girl says that: "I will never smoke because my mother started smoking and I can see that smoking is

something bad and destructive”. A 15-year-old non-smoking boy says that: “given the fact that my mother smokes too much, my father used to smoke a lot in the past and my cousins smoke too much, I believe that I will never accept it or even try it”. A 12-year-old non-smoking girl says that: “I don’t like smoking because I have seen my father smoking and I don’t like the smell. Moreover, my dad has suffered many diseases because of smoking”.

However, there are some children who seem to be influenced by the example that is set by their smoking parents. A 15-year-old non-smoking girl says that: “since everybody in my family smokes, I think that it is very likely that I will start smoking systematically in the future, although for the time being I avoid it as much as I can”. Another 15-year-old girl who has experimented with cigarettes says that: “I will smoke in the future because I have grown used to the smoke, since my parents and most people that I know smoke”.

3.3.2. Influence of perceived parental attitudes

The vast majority of adolescents (97.5%) perceive their parents as having a negative attitude towards their smoking, but quite a few experiment with cigarettes or take up smoking.

In the second phase of the study, the question asked in phase one is refined, to discriminate more finely between perceived parental attitudes. The pupils are asked to name the reaction that their parents would have to their smoking in order to qualify the terms ‘negative’, ‘positive’ and ‘neutral’ reaction. The

options the pupils have to choose from are the following (derived from pilot work): ‘they would cut my allowance’, ‘they would not let me go out with my friends’, ‘they would talk me into not smoking’, ‘they would simply discuss it with me’, ‘they would not interfere at all’, ‘they would allow me to smoke’ and ‘other’. The results are shown in Table 7.

Table 7. Percentage of pupils’ perceived parental reaction to their children smoking (N= 672)

cut my allowance	4.3%
not let me go out with my friends	7%
talk me into not smoking	64.3%
simply discuss it with me	13.5%
would not interfere at all	2.2%
would allow me to smoke	2.1%
other	6.5%

The difference between ‘talk me into not smoking’ and ‘simply discuss it with me’, is that there is a negative dimension in the first statement, since it is implied that the reaction of the parents is stronger and more immediate.

The relationship between the perceived parental reaction to their children smoking and the children’s smoking behaviour is statistically significant both at phase one Table 8. ($\chi^2 = 79.35$, $df = 18$, $p < .001$) and at phase two Table 9. ($\chi^2 = 102.17$, $df = 18$, $p < .001$). Children who think that their parents will cut their allowance, not let them go out with their friends and talk them into not smoking tend to be non-smokers. A 12-year-old non-smoking girl says that: “I won’t smoke because my parents do not smoke and they will not approve of it”. Where

children think that their parents would not interfere at all or will allow them to smoke, they are more likely to smoke.

Table 8. Percentages of pupils' smoking behaviour at phase one by the perceived reaction of their parents at phase two

Smoking Behaviour	Perceived Parental Reaction						
	cut my allowance N=29	not let me go out with my friends N=47	talk me into not smoking N=431	simply discuss it with me N=91	not interfere at all N=15	allow me to smoke N=12	other N=44
non-smoker	82.8%	70.2%	77.1%	57.1%	26.7%	28.6%	61.4%
smoked once	13.8%	12.8%	12.3%	19.8%	26.7%	7.1%	22.7%
occasional smoker	0%	10.6%	7.2%	13.2%	26.7%	21.4%	9.1%
regular smoker	3.4%	6.4%	3.5%	9.9%	19.9%	42.9%	6.8%

Table 9. Percentages of pupils' smoking behaviour by the perceived reaction of their parents at phase two

Smoking Behaviour	Perceived Parental Reaction						
	cut my allowance N=29	not let me go out with my friends N=47	talk me into not smoking N=431	simply discuss it with me N=91	not interfere at all N=15	allow me to smoke N=12	other N=44
non-smoker	72.4%	57.4%	66.4%	47.3%	6.7%	21.4%	56.8%
smoked once	20.7%	19.1%	18.3%	17.6%	40%	0%	20.5%
occasional smoker	0%	12.8%	9%	22%	13.3%	14.3%	6.8%
regular smoker	6.9%	10.6%	6.3%	13.2%	40%	64.3%	15.9%

This relationship between the age of the pupils and the perceived reaction of their parents to their smoking is statistically significant at phase two ($\chi^2=52.26$, $df=6$, $p<.001$). More 12-13 year-olds believe that their parents will cut their allowance and talk them into not smoking. The 15-16 year-old pupils tend to believe that their parents will simply discuss it with them, will not interfere at all or will allow them to smoke (Table 10).

Table 10. Percentages of perceived parental reactions by the age of the pupils at phase two

Perceived Parental Reaction	12-13 years old (N=351)	15-16 years old (N=321)
cut my allowance	6%	3%
not let me go out with my friends	7%	7%
talk me into not smoking	72%	56%
simply discuss it with me	7%	21%
would not interfere at all	1%	4%
would allow me to smoke	0%	3%
other	7%	6%

There is no statistically significant association between the gender of the pupils and the perceived reaction of their parents either at phase one ($\chi^2=2.85$, $df=2$, $p>.05$) or at phase two ($\chi^2=4.57$, $df=6$, $p>.05$).

When interviewed, other children mention that there are some other parents who take a more active role in the formation of their children's smoking behaviour. They give their children their first cigarette, so that their children will not smoke secretly and hope that their children will not enjoy it. This is documented by the children and in the following examples: A 12-year-old girl who experimented with cigarettes once says that: "my parents offered me a cigarette to try in an attempt to show me that it is nothing important". Another 12-year-old girl says that: "my parents have offered me a cigarette to see if I like it. I don't like it, but in the future I may want to try again". It should be mentioned that the parents who smoke themselves are the ones who use this method.

An alternative method used by the parents to achieve the same goal is to discuss the smoking habit with their children and advise them not to smoke. At interview, children portray parental guidance as a protective factor against the experimentation with cigarettes. This is especially true for younger pupils, who seem to have a closer relationship with their parents. A 12-year-old non-smoking boy says that: "I turned down the offer to smoke cigarettes because I thought of my parents' words. They are both non-smokers". A 12-year-old non-smoking girl says that: "I have been trained by my parents to turn down offers to experiment with cigarettes and I was prepared. They have explained to me that it is perfectly acceptable to follow my own will, even if it is against the will of the majority". A 12-year-old non-smoking boy says that: "I have declined many offers to smoke cigarettes because I have been very well informed about its bad consequences by my father on several occasions". A 12-year-old non-smoking girl says that: "my parents talked to me about the consequences of smoking on health". This could relate to Jessor's 'problem behaviour' theory, according to which non-smokers are closer to parents on average than smokers. So, it could be argued that there is a possibility that the finding that parental guidance can act as a protective factor against cigarette smoking relates to the quality of parent-child relationship.

The majority of pupils (86%) site in their questionnaires their parents as their main source of information on the facts about smoking. There is a statistically significant association between the source of information and the smoking behaviour of the pupils ($\chi^2 = 70.61$, $df = 12$, $p < .001$). Non-smoking pupils are the ones who get more information from their parents than the pupils who smoke or have experimented with smoking (Table 11). Being aware of the sources of

information is quite important, since these effective sources can be used for the ‘transmission’ of a variety of information and to the pupils and parents constitute a ‘popular’ source of information.

Table 11. Percentages of the smoking behaviour of the pupils by the sources of information regarding facts about smoking

Smoking Behaviour	Sources of Information				
	Parents (N=575)	Friends (N=16)	Mass Media (N=46)	School (N=15)	Other (N=20)
non-smoker	75%	37.5%	60.9%	33.3%	35%
smoked once	12.7%	25%	17.4%	53.3%	15%
occasional smoker	7.5%	25%	15.2%	13.4%	15%
regular smoker	4.8%	12.5%	6.5%	0%	35%

3.4. Smoking Prevalence and Siblings

The influence of siblings’ smoking behaviour is of interest in this particular section. The majority of studies that have explored this factor, claim that it is a strong predictor of adolescent smoking. A statistically significant relationship between the smoking behaviour of the siblings and that of the adolescent ($\chi^2=106.274$, $df = 6$, $p<.001$) is found here as well. When their siblings smoke, adolescents are more likely to be occasional or regular smokers (Table 12).

Table 12. Percentages of pupils’ smoking behaviour by siblings’ smoking behaviour

Pupils’ Smoking Behaviour	Siblings’ Smoking Behaviour		
	Smoking Siblings (N=97)	Non-Smoking Siblings (N=483)	No Siblings (N=92)
non-smoker	42.3%	76.6%	71.7%
smoked once	12.4%	14.9%	13%
occasional smoker	19.6%	6.4%	9.8%
regular smoker	25.8%	2.1%	5.4%

Table 12 shows that pupils with no siblings are similar to those with non-smoking siblings, indicating that the presence of a smoking sibling is an important factor. However, pupils are interviewed about the circumstances under which they are offered cigarettes and none of them name their siblings as the person who offers them a cigarette. This indicates that influential factors may be subtle. There is a statistically significant association between the age of the pupils and the smoking behaviour of their siblings ($\chi^2=23.77$, $df=2$, $p<.001$). Older pupils have more smoking siblings than younger pupils (Table 13).

Table 13. Percentages of siblings' smoking behaviour by the age of the pupils

Siblings' Smoking Behaviour	12-13 years old (N=351)	15-16 years old (N=321)
smoking siblings	8%	21%
non-smoking siblings	78%	65%
no siblings	14%	14%

There is no statistically significant association between the gender of the pupils and the smoking behaviour of their siblings ($\chi^2=2.15$, $df=2$, $p>.05$).

3.5. Smoking Prevalence and Friends

Do adolescents share and follow the habits of their existing friends or do they choose their friends on the basis of their habits? This question is explored in this section.

3.5.1. Influence of friends' smoking behaviour

The association between the amount of friends who smoke and the smoking behaviour of the adolescents is statistically significant ($\chi^2 = 305.16$, $df = 3$, $p < .001$). Adolescents who have a lot of friends who do not smoke are usually non-smokers themselves (Table 14).

Table 14. Percentages of pupils' smoking behaviour by the amount of friends who smoke

Pupils' Smoking Behaviour	Amount of friends who smoke	
	All – Most (N=119)	Few – None (N=553)
Non- Smoker	5%	95%
Smoked Once	19.8%	80.2%
Occasional Smoker	64.4%	35.6%
Regular Smoker	95%	5%

It is noteworthy that the percentage of the regular smokers who have a lot of smoking friends (95%) is exactly the same as for the non-smokers who have only a few or no smoking friends. The Wilcoxon test is used - since the nature of the data is ordinal ($z = -8.37$, $p < .001$) – and confirms that the relationship between the two variables is statistically significant.

There is a statistically significant association ($\chi^2 = 124.51$, $df = 1$, $p < .001$) between the age of the pupils and the amount of their smoking friends. Older pupils tend to have more smoking friends than younger pupils (Table 15).

Table 15. Percentages of the amount of friends who smoke by the age of the pupils

Amount of friends who smoke	12-13 years old (N=351)	15-16 years old (N=321)
all-most	2%	35%
few-none	98%	65%

The relationship between the gender of the pupils and the amount of their friends who smoke is statistically significant ($\chi^2=5.30$, $df=1$, $p<.05$). More girls than boys tend to have a lot of friends who smoke (Table 16).

Table 16. Percentages of the amount of friends who smoke by the gender of the pupils

Amount of friends who smoke	boys (N=341)	girls (N=331)
all-most	14%	21%
few-none	86%	79%

Data from the interview shows that friends can ‘encourage’ adolescents to take up smoking or act as a protective factor against smoking. The pro-smoking influence is presented first. A 15-year-old girl who smokes regularly says that: “I started smoking because I saw all my friends smoking and I felt jealous”. A 15-year-old girl who experimented with cigarettes says that: “I did it because my friends pressured me to smoke”. A 12-year-old non-smoking boy says that: “sometimes someone may feel in a disadvantaged position in a group of friends who smoke. So, I could have taken up smoking but I am an athlete and I have turned down the offers”. Finally, a 15-year-old non-smoking girl says that: “I realised that when someone smokes, he/she does not do it necessarily because he/she is a weak character or a punk or someone who wants to show off. There

are some people who smoke simply out of curiosity, because they like it and thus get used to it. I realised this when my best friend started smoking and we analysed together the reasons that led her to this choice”.

Approximately half of the adolescents (51%) are offered cigarettes in many different places by their friends. A 15-year-old girl who smokes occasionally says that: “I had been offered cigarettes while out with friends”. There are also a few pupils (8%) who say that they are offered cigarettes while on the school premises. A 12-year-old non-smoking boy says that: “I have been offered cigarettes many times in the school toilets by a boy who didn't make it into the next class. A friend asked me during the break to buy a packet of cigarettes just to try smoking”. A 12-year-old non-smoking girl says that: “I have been offered cigarettes mainly by older friends at the school”.

There are a few pupils (3%) who refer to direct or indirect peer pressure to justify their decision to experiment with cigarettes. A 12-year-old girl who smokes occasionally says that: “I felt uncomfortable because everybody around me was smoking, so I accepted the offer to smoke”. A 12-year-old boy who experimented with cigarettes says that: “I tried smoking one time because all my friends were smoking”. A 12-year-old boy who smokes occasionally says that: “I smoked because my friends called me ‘mummy’s little boy’ and I am not. I proved it to them”. A 12-year-old girl says that: “I tried smoking once, when I was found in a group of children who smoked and made fun of me because I was a non-smoker”.

The fact that friends can act as behavioural models is something that both teachers and pupils agree on. A 12-year-old girl who smokes occasionally says that: “the school is not an appropriate place to smoke, because the rest of the pupils are exposed to a bad example”. A 12-year-old non-smoking girl says that: “pupils should not be allowed to smoke at school because it is a place where we go to get educated. Moreover, there are younger children at school who might feel the curiosity to try cigarettes when they see older children smoking”. A 12-year-old non-smoking boy says that: “pupils should not be allowed to smoke on the school premises because they will encourage other students to smoke and I do not want them to”. The younger pupils (67%) are primarily the ones who consider that pupils act as role models and set a bad example.

Friends can also act as a protective factor against smoking. For example, a 15-year-old girl says that: “I tried smoking for the first time this year. I have smoked only two cigarettes in my entire life. I felt that I was addicted to cigarettes for a week, but when I talked to my friends about it, they reacted very badly and told me to give it up and I did”. A 15-year-old non-smoking girl says that: “my best friend smoked her first cigarette. When she told me, she felt disturbed. Then I discussed it with her and expressed my negative opinion to her regarding smoking. But then I left her alone to make up her own mind, since it is my friend’s choice”.

The anti-smoking influence that the smoking behaviour of friends can exert is demonstrated further in the following examples. A 15-year-old non-smoking boy says that: “my attitude towards smoking has always been a negative one. For

example, this year I saw that some of my friends started to smoke ‘for the company’ and finally became addicted to it”. Another 15-year-old non -smoking boy says that: “I observed that many of my classmates and friends started smoking and so I detested smoking even more”. A 15-year-old girl says that: “all my friends smoke and since I see that they cannot live without cigarettes I don’t want to become like them”. Another one says that: “some of my friends experimented with cigarettes and told me that it is horrible”.

3.5.2. Influence of perceived friends’ attitudes

There is a statistically significant association between the pupils’ current smoking behaviour and the perceived attitude of the friends towards the adolescents’ smoking ($\chi^2 = 101.12$, $df = 6$, $p < .001$). It is found that most adolescents feel that their friends (would) disapprove or do nothing about their smoking. The same tendency is apparent in the second phase of the study when pupils are asked to specify how they think that their friends would react to their smoking. They are given the following alternatives: ‘they would avoid hanging out with me’, ‘they would advise me not to smoke’, ‘they wouldn’t interfere with my decision’, ‘they would offer me a cigarette and join me’ and ‘other’ (Table 17).

Table 17. Percentages of pupils’ perceived reaction of their friends to their smoking (N=672)

avoid hanging out with me	8%
advise me not to smoke	56.3%
wouldn’t interfere with my decision	23.2%
offer me a cigarette and join me	8.9%
other	3.6%

Further analysis shows that there is a statistically significant association between the smoking behaviour of the adolescents and the perceived reaction of their friends to their smoking Table 18. ($\chi^2=354.74$, $df = 6$, $p<.001$). Specifically, occasional and regular smokers tend to think that their friends would offer them a cigarette and join them (positive reaction), while non-smokers tend to believe that their friends would avoid hanging out with them and advise them not to smoke (negative reaction). However, a substantial amount of adolescents who experimented with smoking (30%) believe that their friends would not interfere with their decision to smoke (neutral/positive reaction).

Table 18. Percentage of pupils' smoking behaviour by the perceived reaction of their friends to their smoking at phase two

Pupils' Smoking Behaviour	Perceived reaction of friends' to pupils' smoking				
	avoid hanging out with me (N=54)	advise me not to smoke (N=378)	wouldn't interfere with my decision (N=156)	offer me a cigarette and join me (N=60)	Other (N=24)
non-smoker	88.9%	73.3%	36.5%	21.7%	50%
smoked once	5.6%	17.5%	30.1%	8.3%	16.7%
occasional smoker	3.7%	5.6%	16.7%	30%	20.8%
regular smoker	1.9%	3.7%	16.7%	40%	12.5%

There is a statistically significant association between the age of the pupils and the perceived reaction of their friends to their smoking at phase one ($\chi^2=101.37$, $df=2$, $p<.001$). More 12-13 year-olds believe that their friends will (would) react to their smoking in a negative way (81%). Older pupils (56%) believe that their friends will exhibit a more neutral or positive attitude (Table 19).

Table 19. Percentages of pupils' perceived reaction of their friends to their smoking by the age of the pupils at phase one

Perceived reaction of friends to pupils' smoking	12-13 years old (N=351)	15-16 years old (N=321)
negative	81%	44%
neutral	18%	52%
positive	1%	4%

There is a statistically significant association between the age of the pupils and the perceived reaction of their friends to their smoking at phase two ($\chi^2=152.65$, $df=4$, $p<.001$). Younger pupils believe that their friends will avoid hanging out with them and advise them not to smoke (74%). Older pupils believe that their friends will not interfere and offer them a cigarette and join them (54%), as shown in Table 20.

Table 20. Percentages of pupils' perceived reaction of their friends to their smoking by the age of the pupils at phase two

Perceived reaction of friends to pupils' smoking	12-13 years old (N=351)	15-16 years old (N=321)
avoid hanging out with me	15%	1%
advise me not to smoke	69%	42%
wouldn't interfere with my decision	10%	38%
offer me a cigarette and join me	2%	16%
other	4%	3%

The association between the gender of the pupils and the perceived reaction of their friends to their smoking is statistically significant at phase one ($\chi^2=6.07$, $df=2$, $p<.001$). Girls perceive their friends as having a negative reaction (67%), while one third of the boys believe that their friends will/would foster a neutral attitude (Table 21). This relationship is not statistically significant at phase two ($\chi^2=6.09$, $df=4$, $p>.05$).

Table 21. Percentages of pupils' perceived reactions of their friends to their smoking by the gender of the pupils at phase one

Perceived reaction of friends to pupils' smoking	boys (N=341)	girls (N=331)
negative	59%	67%
neutral	39%	30%
positive	2%	3%

An example of a 'negative reaction' can be seen in the statement of a 15-year-old non-smoking girl, who says that: "a friend of mine started smoking. What impressed me was the fact that from the first moment she advised me never to be tempted to try it. Although before I had a neutral attitude, I realised lately that my attitude is negative". The 'positive reaction' is pictured in the words of a 16-year-old girl who is an occasional smoker and says that: "I smoke in the friendship group, under pressure or even to become part of the mass. I don't like to belong to the mass, but sometimes it is essential". There is also the testimony of a 12-year-old boy who says that: "I started smoking when a friend of mine offered me a cigarette and told me that I was a 'chicken' because I was afraid to smoke". A 12-year-old non-smoking girl says that: "I feel that if all my friends start smoking I will not be able to resist and I will smoke as well". A 15-year-old non-smoking girl says that: "I will smoke in the company of friends, especially when all my friends smoke". Another 15-year-old non-smoking girl says that: "I may smoke because of pressure from my friends". A 12-year-old non-smoking boy says that: "I am certain that I will smoke when my friends encourage me to".

Many children experiment with smoking and are offered cigarettes in the company of their friends, regardless of whether they decide to keep smoking or not. A 15-year-old girl says that: "I started smoking together with my friends, but

when I realised that they were smoking more and more my attitude changed and I decided to quit smoking. Now I am trying and I am sure that I will make it". Another girl says that: "I was very upset for a reason and while I was sitting with a friend of mine I decided to try it. I also felt very curious". A 12-year-old non-smoking girl says that: "a very good friend of mine tried a cigarette and offered me one, but I turned down his offer". A 12-year-old boy says that: "a friend of mine offered me a cigarette and I decided to experiment with smoking. I was coughing for a long time. I do not think that I will ever try a cigarette again". These examples are very useful in understanding that although friends are present in experimentation with smoking, it is also up to the individual to decide what he/she will do from that point onwards. Some decide to keep up the smoking habit, while others turn against it. This point is very important, since we should always keep in mind that the individual is not just a passive recipient of images and influences, but an active and responsible human being.

3.6. Smoking Prevalence and Teachers

The role of teachers in the formation of the smoking behaviour of the pupils has not been adequately explored. An additional motive for considering and examining this parameter in the present study is that teachers smoke on the school premises in Greece. It would be interesting to see if and how this fact influences the smoking status of the pupils.

The analysis of the data at phase one regarding the perceived reaction of the teachers towards pupils' smoking shows that pupils who have experimented with

smoking or have taken up smoking, perceive their teachers as having a neutral attitude towards their (potential) smoking and will “do nothing” (Table 22).

Table 22. Percentages of perceived teachers’ reaction to pupils’ smoking by the smoking behaviour of the pupils

Smoking Behaviour	Perceived Teachers’ Reaction		
	Negative (N=468)	Neutral (N=199)	Positive (N=5)
Non-Smoker	78%	55.8%	20%
Smoked Once	11.5%	21.1%	0%
Occasional Smoker	6.8%	13.1%	20%
Regular Smoker	3.7%	10%	60%

When pupils are asked – in phase two - to specify how they think that their teachers would react to their smoking, they have to choose from: ‘tell me not to smoke again’, ‘expel me from school’, ‘notify my parents’, ‘tell me to smoke in a certain area’, ‘do nothing’ and ‘other’ (Table 23).

Table 23. Percentages of pupils’ perceived reaction of their teachers to their smoking

tell me not to smoke again	13.5%
expel me from school	25.9%
notify my parents	28.6%
tell me to smoke in a certain area	12.8%
do nothing	14.1%
Other	5.1%

A statistically significant association is found between the pupils’ smoking behaviour and their beliefs about the reaction of their teachers to their smoking ($\chi^2=31.28$, $df = 2$, $p<.001$). More precisely non-smoking pupils tend to believe that if they are caught smoking on the school premises they will be told not to smoke, expelled from school or that their parents will be notified. Occasional and

regular smokers tend to believe that the teachers will do nothing if they see them smoking (Table 24).

Table 24. Percentage of pupils' smoking behaviour by the perceived reaction of their teachers to their smoking

Pupils' Smoking Behaviour	Perceived reaction of teachers to pupils' smoking					
	tell me not to smoke again (N=91)	expel me from school (N=174)	notify my parents (N=192)	tell me to smoke in a certain area (N=86)	do nothing (N=95)	Other (N=34)
non-smoker	62.6%	65.5%	67.2%	53.6%	44.2%	55.9%
smoked once	19.8%	20.1%	16.7%	15.1%	24.2%	11.8%
occasional smoker	11%	8.6%	6.3%	16.3%	20.8%	17.6%
regular smoker	6.6%	5.7%	2.8%	15.1%	15.8%	14.7%

The association between the age of the pupils and the perceived reaction of their teachers to their smoking at phase one is statistically significant ($\chi^2=128.74$, $df=2$, $p<.001$). The majority of younger pupils perceive their teachers as having a negative attitude towards their smoking. Half of the older pupils tend to perceive their teachers as having a neutral attitude towards their smoking (Table 25).

Table 25. Percentages of the pupils' perceived reaction of their teachers to their smoking by the age of the pupils at phase one

Perceived reaction of teachers to pupils' smoking	12-13 years old (N=351)	15-16 years old (N=321)
negative	89%	49%
neutral	10%	50%
positive	1%	1%

The association between the age of the pupils and the perceived reaction of their teachers to their smoking at phase two is statistically significant ($\chi^2=120.34$, $df=5$, $p<.001$). Younger pupils believe that their teachers will expel them from school and notify their parents (72%). Almost half of the older pupils perceive

their teachers as allowing them to smoke in a certain area or as not doing anything (Table 26).

Table 26. Percentages of the pupils' perceived reaction of their teachers to their smoking by the age of the pupils at phase two

Perceived reaction of teachers to pupils' smoking	12-13 years old (N=351)	15-16 years old (N=321)
tell me not to smoke again	13%	14%
expel me from school	36%	14%
notify my parents	36%	21%
tell me to smoke in a certain area	5%	21%
do nothing	6%	23%
other	4%	7%

There is no statistically significant association between the gender of the pupils and the perceived reaction of their teachers to their smoking either at phase one ($\chi^2=0.99$, $df=2$, $p>.05$) or at phase two ($\chi^2=5.47$, $df=5$, $p>.05$).

Teachers are considered by some of the pupils to be influential, while other pupils do not believe that their teachers exert any kind of influence over them. The role of teachers as behavioural models is a notion that has been of interest for many years but has not been adequately examined. The pupils, though, justify their opinion that their teachers should or should not be allowed to smoke on the school premises based on whether they consider them as behavioural models or not.

More precisely, some pupils argue that teachers should be allowed to smoke at school because they do not act as behavioural models. A 15-year-old girl who smokes regularly says that: "there is no reason why teachers should not be allowed to smoke on the school premises since their actions do not exert any kind

of influence on the pupils. The pupils who want to smoke will do so. The pupils who don't want to smoke won't". A 15-year-old non-smoking boy says that: "I believe that teachers' smoking behaviour doesn't influence the pupils at all and that the teachers who smoke do so out of habit, which is why it is not easy to quit smoking". A 15-year-old boy who smokes occasionally says that: "I do not believe that teachers can harm the children in any way. They can neither encourage the students nor influence them". Mainly older pupils, who have experimented with cigarettes or are occasional/regular smokers, express this view.

There are also some pupils who believe that regardless of whether the teachers smoke in front of the pupils or not, they are setting a bad example since pupils in general and especially the younger pupils view them as role-models. A 12-year-old girl who smoked once says that: "teachers should not smoke at school because they set a bad example for the children. If a teacher doesn't want the pupils to smoke he/she should not smoke either". A 12-year-old non-smoking boy says that: "teachers are supposed to set a good example for the pupils. I do not believe that smoking is something worth imitating, which is why teachers should not smoke on the school premises". Another 12-year-old non-smoking boy says that: "teachers must not smoke at school because they do not provide a good example for the pupils. I am not influenced by their behaviour, but what about younger and weaker pupils?". Non-smoking pupils (41%) and the ones who have experimented with cigarettes once (30%) tend to express this view, which is equally shared by boys and girls of both age groups.

However, other non-smokers hold different views. The teachers are considered to be influential because they are responsible adults. Being an adult seems to justify smoking. The pupils who approve of their teachers' smoking do so mostly because they consider that teachers are adults and that if they decide to act in a certain way they must have a reason for it. Being an adult seems to be associated with maturity and responsibility. These pupils consider that their teachers choose to smoke after careful consideration and assume responsibility for their choice. A 15-year-old boy who smokes occasionally says that: "everybody has the responsibility for taking care of himself/herself in the best way he/she can. Likewise, the teachers have the right to smoke if it is something that they want that much. They are adults and thus responsible human beings and they cannot be treated as children". A 15-year-old non-smoking boy said that: "I do not see any reason why teachers shouldn't be allowed to smoke at school. Irrespective of whether smoking is good or bad, some people do smoke and this is something that we have to accept and respect. They are adults after all". These beliefs are equally common amongst boys (43%) and girls (57%) of both age groups (42% 12-13 years old and 58% 15-16 years old). Non-smokers (42%) tend to support this position more than pupils who are occasional/regular smokers (22%).

3.7. Smoking Prevalence and School

The aim of this section is to examine whether the smoking behaviour of the pupils is associated with the school that they attend. There is no attempt to associate the schools with a certain social and economic background, especially as it has been found that in the Greek setting there is no significant difference in

smoking behaviour according to the socio-economic status (Davou, 1992). The focus is the way in which the schools address the issue of smoking on the school premises and whether they inform the pupils of the facts about smoking or not. Since pupils have different parents and friends, but share the same teachers and school environment, it is worth exploring this aspect. The issue of perception - i.e. when a pupil says teachers are anti or pro smoking - may say more about the pupil than the teacher, or it may be a true reflection of teachers' attitudes, or something in between. Looking at attitudes by school may clarify this aspect of interpretation.

The schools are divided into 3 gymnasiums and 3 lyceums. For the purpose of analysis the gymnasiums are called: gymnasium1, gymnasium2 and gymnasium3, while the lyceums are called: lyceum1, lyceum2 and lyceum3. The only school that claims to inform pupils about the facts concerning smoking and has a strict policy on pupils' smoking on the school premises is gymnasium3. All the schools admit to having both teachers and pupils smoking on the school premises, while the gymnasiums claim to be stricter on the enforcement of punishments for pupils who are caught smoking.

3.7.1. The influence of school (as an 'educational institution') on adolescent smoking

There is a statistically significant association between the smoking behaviour of the pupils and the school that they attend both in phase one ($\chi^2=183.14$, $df=15$, $p<.001$) and in phase two ($\chi^2=166.38$, $df=5$, $p<.001$). The results are shown in

Table 27 and Table 28. There less smokers in the gymnasiums, while in lyceums there are less non-smokers and more pupils who have experimented with smoking and are occasional or regular smokers. There seems to be no differentiation between gymnasium3 - where there is supposed to be some kind of intervention - and the other two gymnasiums where no interventions take place.

Table 27. Percentage of pupils' smoking behaviour by the school that they attend in phase one

Pupils' Smoking Behaviour	School that they attend to					
	gymn1 (N=121)	Gymn2 (N=103)	gymn3 (N=128)	lyc1 (N=108)	lyc2 (N=88)	lyc3 (N=124)
Non-smoker	95%	87%	91%	38%	51%	56%
Smoked once	4%	9%	8%	23%	19%	24%
Occasional smoker	1%	4%	0%	19%	18%	14%
Regular smoker	0%	0%	1%	20%	11%	6%

Table 28. Percentage of pupils' smoking behaviour by the school that they attend in phase two

Pupils' Smoking Behaviour	School that they attend					
	gymn1 (N=121)	gymn2 (N=103)	gymn3 (N=128)	lyc1 (N=108)	lyc2 (N=88)	lyc3 (N=124)
Non-smoker	82%	78%	80%	29%	44%	45%
Smoked once	16%	13%	15%	23%	18%	26%
Occasional smoker	2%	7%	3%	18%	21%	17%
Regular smoker	0%	2%	2%	30%	17%	12%

In order to obtain more accurate information on the effect of each school it is better to consider gymnasiums and lyceums separately. Otherwise, the analysis will reflect the trends of the separate age groups and not of the schools.

3.7.1.1. *Gymnasiums*

There is no statistically significant association between the school (gymnasium) that pupils attend and their smoking behaviour either at phase one or at phase two. Moreover, there is no statistically significant association between the school that the pupils attend and the perceived attitude of their teachers towards their smoking ($\chi^2=2.07$, $df=4$, $p>.05$). There is no statistically significant association between the school that the pupils attend and the way that they feel about their teachers' smoking ($\chi^2=5.28$, $df=4$, $p>.05$). There is no statistically significant association between the school that the pupils attend and their attitude towards teachers' smoking on the school premises ($\chi^2=3.43$, $df=4$, $p>.05$). This suggests that the varying accounts of teachers' attitudes may be a reflection of the pupil rather than the teacher. The pupil may have found a way of expressing how he/she views smoking.

There is a statistically significant association between the school that the pupils attend and their attitude towards pupils' smoking on the school premises ($\chi^2=11.04$, $df=4$, $p<.05$) (Table 29). Almost all the pupils of the gymn2 (98%) believe that the pupils should not be allowed to smoke on the school premises. For example, a girl who experimented with smoking once and attends gymn2 says that: "Pupils must not smoke on the school premises because if their parents do not know that they smoke and their teachers see them they will notify their parents. Moreover, their teachers would have a bad opinion of them". A non-smoking girl who attends gymn2 says that: "pupils spend many hours in school.

If smoking is forbidden on the school premises they will be forced to smoke less. This could prove very beneficial for them”.

Table 29. Percentages of the attitude towards pupils' smoking on the school premises by the school that the pupils attend

attitude towards pupils' smoking on the school premises	gymn1 (N=121)	gymn2 (N=103)	gymn3 (N=128)
yes	5%	0%	2%
no	88%	98%	94%
not sure	7%	2%	4%

There is no statistically significant association between the school that the pupils attend and how well informed they think that they are concerning the facts about smoking ($\chi^2=6.93$, $df=4$, $p>.05$). However, there is a statistically significant association between the school that the pupils attend and the actual knowledge that they have – as measured by a short true/false questionnaire – ($\chi^2=9.61$, $df=4$, $p<.05$). The pupils who attend gymn1 (94%) are better informed than the pupils who attend gymn2 (84%) and gymn3 (84%).

Another statistically significant association is found between the school that the pupils attend and their perceived increase of knowledge during the academic year ($\chi^2=73.11$, $df=5$, $p<.001$). The majority of pupils who attend gymn2 (91%) seem to believe that they have gained more knowledge of the facts about smoking. Almost one quarter of the pupils who attend gymn3 (the school with antismoking policy and education programme) perceive no increase in their knowledge during the academic year.

There is no statistically significant association between the school that the pupils attend and their sources of information at phase one ($\chi^2=3.10$, $df=8$, $p>.05$). There is, though, a statistically significant association ($\chi^2=49.42$, $df=10$, $p<.001$) between the school that pupils attend and their sources of information at phase two. Half of the pupils from gym1 receive their information from the Mass Media and their school and $\frac{3}{4}$ of the pupils from gym2 identify their parents, friends and school as sources of information. One quarter of the pupils from gym3 report that they have not received any information and half of the other pupils identify their parents and friends as their sources of information (Table 30). For example, a non-smoking girl who attends gym2 says that: “my parents talked to me about the consequences of smoking on my health”. A non-smoking boy who attends gym1 says that: “I saw pictures of smokers who suffered from cancer or heart problems on television”.

Table 30. Percentages of the sources of information of the pupils by the school that they attend at phase two

Sources of information	gym1 (N=121)	gym2 (N=103)	gym3 (N=128)
no more information	17%	9%	23%
parents	26%	36%	37%
friends	5%	22%	16%
Mass Media	23%	10%	14%
school	23%	23%	10%
other	6%	0%	0%

There is a statistically significant association between the school that pupils attend and their intention to smoke in the future ($\chi^2=12.93$, $df=4$, $p<.05$) (Table 31). Almost $\frac{3}{4}$ of the pupils from gym1 believe that they would not smoke in the future. Half the pupils from gym2 claim that they would smoke in the future or that they are not sure about it. Almost 40% of the pupils from gym3 are not

certain whether they would smoke in the future or not (Table 29). A non-smoking girl who attends gym1 says that: “I will not smoke because I know the consequences of smoking and I do not want this to happen to me”.

Table 31. Percentages of the pupils' intentions to smoke in the future by the school that they attend

intention to smoke in the future	gymn1 (N=121)	gymn2 (N=103)	gymn3 (N=128)
yes	5%	11%	9%
no	72%	51%	53%
not sure	23%	38%	38%

3.7.1.2. *Lyceums*

There is no statistically significant association between the school (lyceum) that pupils attend and their smoking behaviour either at phase one or at phase two. Moreover, there is no statistically significant association between the school that the pupils attend and the perceived attitude of the teachers towards their smoking ($\chi^2=14.83$, $df=4$, $p>.05$). There is a statistically significant association between the school that the pupils attend and the way that they feel about their teachers' smoking ($\chi^2=27.21$, $df=4$, $p<.001$)(Table 32).

Table 32. Percentages of the pupils' feelings about their teachers' smoking by the school they attend

Attitudes towards teachers' smoking	lyceum1 (n=108)	lyceum2 (n=88)	lyceum3 (n=124)
negative	21%	14%	35%
neutral	61%	82%	59%
positive	18%	4%	6%

Almost 20% of the pupils from lyc1 have a positive attitude towards their teachers' smoking in comparison to 4% and 6% of the other two lyceums. More than 1/3 of the pupils from lyc3 have a negative attitude towards their teacher smoking compared to 21% and 14% of the other two lyceums. For example, a non-smoking boy who attends lyc3 says that: "it's not good to see your teachers smoking. You do not feel comfortable when they tell you not to smoke when they smoke at the same time". A girl who is a regular smoker and attends lyceum1 says that: "I approve of teachers' smoking because they are adults and I guess that they need to smoke at their age, just as I will need to smoke then".

These results are supported by the association between the school that pupils attend and their attitude towards their teachers' smoking on the school premises, which is statistically significant ($\chi^2=12.35$, $df=4$, $p<.05$) (Table 33).

Table 33. Percentages of pupils' attitudes towards their teachers' smoking on the school premises by the school they attend

Attitudes towards teachers' smoking on the school premises	lyceum1 (n=108)	lyceum2 (n=88)	lyceum3 (n=124)
yes	42%	36%	23%
no	36%	43%	56%
not sure	22%	21%	21%

More than half of the pupils from lyc3 are against their teachers' smoking on the school premises in comparison to 36% and 43% of the other lyceums, while 42% of the pupils from lyc1 approve of their teachers' smoking at school compared with 36% and 23% of the other two lyceums. For example, a non-smoking girl who attends lyc3 says that: "teachers should not be allowed to smoke on the school premises because many children may get carried away and smoke

believing that they are being encouraged to smoke by their smoking teachers”. A girl who attends lyc1 and is a regular smoker says that: “I don’t see why the teachers should not be allowed to smoke on the school premises. Regardless of whether smoking is good or bad, some people do smoke and we have to accept and respect that”.

There is a statistically significant association between the school that the pupils attend and their attitude towards pupils’ smoking on the school premises ($\chi^2=30.24$, $df=4$, $p<.001$) (Table 34).

Table 34. Percentages of pupils’ attitudes towards pupils’ smoking on the school premises by the school they attend

Attitudes towards pupils’ smoking on the school premises	lyceum1 (n=108)	lyceum2 (n=88)	lyceum3 (n=124)
yes	42%	27%	23%
no	23%	55%	56%
not sure	35%	18%	21%

The majority of pupils from lyc1 approve of pupils’ smoking on the school premises, while more than half of the pupils from lyc2 and lyc3 believe that pupils should not be allowed to smoke at school. For example, a boy who has experimented with cigarettes and attends lyc1 wonders: “Since the teachers allow it, why shouldn’t the pupils smoke on the school premises? There is no difference whether they smoke inside or outside of the school premises”. Another boy who attends lyc2 and is a regular smoker says that: “The pupils smoke already and the teachers do not react to it (in lyceum). In gymnasium the pupils smoke secretly”. A boy who attends lyceum1 and is an occasional smoker says

that: “the pupils should smoke because others should not care what they do. It’s their right to make their own choices”.

There is no statistically significant association between the school that the pupils attend and how well informed they think they are about the facts concerning smoking ($\chi^2=2.28$, $df=4$, $p>.05$). However, there is a statistically significant association between the school that the pupils attend and the actual knowledge that they have ($\chi^2=255.63$, $df=2$, $p<.001$). The pupils from lyc1 (80%) are not as well informed as the ones from lyc2 (98%) and lyc3 (97%).

There is no statistically significant association between the school that the pupils attend and their perceived increase of knowledge during the academic year ($\chi^2=0.88$, $df=2$, $p>.05$). The relationship between the school that the pupils attend and their sources of information on the facts about smoking is not statistically significant, either at phase one ($\chi^2=14.15$, $df=8$, $p>.05$) or at phase two ($\chi^2=17.16$, $df=10$, $p>.05$).

There is a statistically significant association between the school that pupils attend and their intention to smoke in the future ($\chi^2=11.83$, $df=4$, $p<.05$). Almost half of the pupils from lyc1 believe that they will smoke in the future, while the same amount of pupils from lyc3 are not sure what will happen in the future with respect to their smoking behaviour (Table 35). For example, a non-smoking girl who attends lyc3 says that: “I will not smoke systematically, but I will definitely try it once or twice”. Another non-smoking girl who attends lyc3 says that: “maybe some day I will smoke, only out of curiosity. The only thing that I hope

for is that if I smoke I will hate cigarettes or at least I will not get addicted to them”.

Table 35. Percentages of the pupils’ intentions to smoke in the future by the school that they pupils attend

Intention to smoke in the future	Lyc1 (N=108)	lyc2 (N=88)	lyc3 (N=124)
yes	41%	37%	22%
no	33%	31%	38%
not sure	26%	32%	40%

3.7.2. The influence of school (as a ‘small society’) on adolescent smoking

Since school is a ‘small society’ it is of interest to see if the rules of the society at large apply to the school as well. In order to examine this, the pupils are asked to state whether they think that teachers and pupils should be allowed to smoke on the school premises and to justify their opinions. Smoking on the school premises is an issue that has not been addressed adequately in the literature, maybe because in most countries smoking is forbidden on school premises. Currently, restrictions on teachers’ smoking are rare in Greek schools and even restrictions on pupils’ smoking are far from commonplace. The fact that this situation is to some extent accepted, or even taken for granted, is illustrated in the following remarks made by participants of this study. A 16-year-old girl who smokes occasionally says that: “the teachers do smoke on the school premises, so discussing what should be done is useless”. Another 16-year-old non-smoking girl says that: “the pupils smoke freely on the school premises”. In this context, it is valuable to examine how pupils feel about their teachers’ and schoolmates’

smoking and to see whether they act as behavioural models or whether they render smoking in general acceptable.

A statistically significant relationship is found between the age of the pupils and their feelings towards their teachers' smoking ($\chi^2=96.18$, $df = 2$, $p<.001$) (Table 36), as well as between their own smoking behaviour and their feelings ($\chi^2=91.25$, $df = 6$, $p<.001$) (Table 37).

Table 36. Percentages of the attitude toward teachers' smoking by the age of pupils

Attitude toward Teachers' smoking	Age of pupils	
	12 and 13 years old (N=351)	15 and 16 years old (N=321)
Negative	61%	24.6%
Neutral	37.3%	66%
Positive	1.7%	9.3%

Table 37. Percentages of the attitude toward teachers' smoking by the smoking behaviour of the pupils

Attitude toward Teachers' smoking	Pupils' smoking behaviour			
	Non-Smoker (N=477)	Smoked Once (N=96)	Occasional Smoker (N=59)	Regular Smoker (N=40)
Negative	53.2%	29.2%	16.9%	2.5%
Neutral	44.2%	62.5%	71.2%	75%
Positive	2.6%	8.3%	11.9%	22.5%

In particular, pupils aged 12-13 years are bothered when they see their teachers smoking, while 15-16 year-olds view their teachers' smoking in a more neutral or positive way (they think it's their own business and / or they approve of it). It

could be the case that since more 15-16 year-olds smoke or have experimented with smoking, they sympathise with their smoking teachers. This hypothesis is supported by the finding that the pupils who have tried smoking once and / or are occasional / regular smokers, nurture more neutral or positive attitudes towards their teachers' smoking. For example, a 12-year-old non-smoking girl says that: "I'd rather the teachers did not smoke because I do not like their attitude. Besides, when they smoke next to me I cough a lot because of the smoke". A 15-year-old boy who smokes regularly says that: "it doesn't bother me, since I smoke as well and I have no problem when the teachers smoke. And even if I didn't smoke, I still wouldn't have any problem, because it's their life and they have the right to smoke".

In an effort to examine whether age or smoking behaviour is the most important factor that influences the pupils' attitudes towards their teachers' smoking, loglinear analysis is used. The final model shows that each factor influences the attitude towards teachers' smoking and that they interact with each other (L-R $\chi^2=969.18$, $df=6$, $p<.05$). These results are presented in Table 38.

Table 38. Percentages of the pupils' attitudes towards their teachers' smoking on the school premises by the age and the smoking behaviour of the pupils

pupils' attitudes towards their teachers' smoking	12-13 years old				15-16 years old			
	non-smoker (N=321)	smoked once (N=24)	occasional smoker (N=5)	regular smoker (N=1)	non-smoker (N=156)	Smoked Once (N=72)	occasional smoker (N=54)	regular smoker (N=39)
negative	63%	37%	40%	0%	33%	26%	15%	3%
neutral	35%	63%	60%	100%	63%	63%	72%	74%
positive	2%	0%	0%	0%	4%	11%	13%	23%

The justifications of their opinions are the following (Table 39):

Table 39. Factors that influence the way pupils feel about their teachers' smoking

	N=150	%=100
The teachers have rights	80	53
The teachers are adults	36	24
Pupils become passive smokers	15	10
How/If smoking affects the teachers work	13	9
Health issues	6	4

Similarly, there is a statistically significant relationship between the age of the pupils and whether they believe that teachers should be allowed to smoke on the school premises ($\chi^2 = 108.12$, $df = 2$, $p < .001$) (Table 40).

Table 40. Percentages of attitude toward teachers' smoking on the school premises by the age of the pupils

Attitude toward teachers' smoking on the school premises	Age of pupils	
	12 and 13 years old (N=351)	15 and 16 years old (N=321)
Yes	5.7%	32.7%
No	82.3%	46.1%
Not Sure	12%	21.2%

More 12-13 year-olds believe that teachers should not be allowed to smoke on the school premises, while more pupils aged 15-16 years hold the opposite belief. This could again be due to the fact that older students have more experience with cigarettes, which is supported by the finding that there is a statistically significant relationship between the smoking behaviour of the pupils and their beliefs regarding whether teachers should be allowed to smoke on the school premises ($\chi^2 = 142.22$, $df = 6$, $p < .001$) (Table 41). In an effort to establish whether age or smoking behaviour is the most important factor, log-linear analysis is used. The final model shows that each factor influences the attitude towards teachers'

smoking independently, and that they interact with each other (L-R $\chi^2=932.95$, $df=6$, $p<.05$).

Table 41. Percentages of the attitude toward teachers' smoking on the school premises by the smoking behaviour of the pupils

Attitude toward Teachers' smoking on the school premises	Pupils' smoking behaviour			
	Non-Smoker (N=477)	Smoked Once (N=96)	Occasional Smoker (N=59)	Regular Smoker (N=40)
Yes	8.8%	30.2%	45.8%	67.5%
No	76.1%	52.1%	28.8%	17.5%
Not Sure	15.1%	17.7%	25.4%	15%

Pupils who experimented with smoking or are occasional / regular smokers state that teachers should be allowed to smoke on the school premises. The reasons that the interviewed pupils provide for feeling the way they do about their teachers' smoking on the school premises are listed in Table 42.

Table 42. Factors that influence the way pupils feel about their teachers' smoking on the school premises

	N=150	%=100
The teachers as behavioural models	66	44
The teachers are free people with rights	34	23
The teachers should show respect	30	20
The pupils become passive smokers	12	8
The teachers are addicted	7	5

Consistent with the findings shown above that there is a relationship between pupils age, their smoking behaviour and their attitudes towards other's smoking, a statistically significant relationship exists between the age of the pupils and their beliefs regarding whether pupils should be allowed to smoke on the school premises ($\chi^2= 190.15$, $df = 2$, $p<.001$). Pupils aged 12-13 years believe that pupils should not be allowed to smoke on the school premises, while pupils aged

15-16 years hold the opposite belief. It is also found that there is a statistically significant association between the smoking behaviour of the pupils and their beliefs regarding whether pupils should be allowed to smoke on the school premises ($\chi^2 = 238.37$, $df = 6$, $p < .001$). Non-smoking pupils believe that pupils should not be allowed to smoke on the school premises, while pupils who have experimented with cigarettes and/or are occasional or regular smokers believe the opposite. In an effort to unpick whether age or smoking behaviour is the most important factor, loglinear analysis is used. The final model shows that each factor influences the attitude towards pupils' smoking and that they interact with each other (L-R $\chi^2 = 1026.48$, $df = 6$, $p < .05$). The factors that the pupils report to justify the way that they feel about the pupils' smoking on the school premises are presented in Table 43.

Table 43. Factors that influence the way pupils feel about pupils' smoking on the school premises

	N=150	%=100
The pupils should show respect	38	25
The pupils are free people with rights	24	16
The pupils as behavioural models	24	16
Health issues	13	9
The pupils and the teachers have the same rights	11	7
The issue of maturity	11	7
A ban is not the answer	9	6
The pupils risk suspension	8	5
The school is not responsible for the pupils	6	4
The pupils' addiction	6	4

A careful examination of the pupils' justifications provides an indication of the application of society's rules (written or not) within the school environment, which in turn modifies the influence that the school exerts on the pupils. By living in the school environment the pupils learn their rights, obligations and

responsibilities, as well as the rights, obligations and responsibilities of their teachers and their school. These are used, in turn, to form an understanding of young people's and other's smoking behaviour and shape their attitudes towards smoking in general. This qualitative data is gathered from the 150 pupils who were interviewed at both phases of the study.

3.7.2.1. Teachers and pupils should be allowed to smoke on the school premises

3.7.2.1.1. Rights / Freedom

There is the issue of rights, which is closely linked to the ideas of freedom and democracy. Free human beings who live in a democratic world seem to have certain rights, like freedom of expression and to act the way they want. There are some young people who approve of teachers' and pupils' smoking and believe that teachers and pupils should be allowed to smoke on the school premises since they are free people. For example, a 15-year-old girl who smokes regularly says that: "teachers, like other professionals, are free people and they should be able to smoke on the school premises. I believe that their personal choices should not be influenced by the profession that they practice". A 15-year-old boy who smokes occasionally says that: "pupils should be allowed to smoke because they have made a choice and nobody can deny them the right to smoke". It is found that boys (60%) and girls (40%) believe equally in the rights of teachers and pupils, while the older pupils (93%) and the ones who smoked occasionally or regularly (59%) seem to support this notion more strongly.

Moreover, to many pupils it is obvious that if the teachers have some rights (e.g. to smoke on the school premises), the pupils must share these rights as well. For example, a 12-year-old boy who experimented with cigarettes once says that: “I don’t mind if the teachers smoke at school in general. But then the pupils who smoke would ask: ‘why can’t we smoke as well?’”. Mainly older pupils (91%) of both sexes who smoke occasionally (27%) or regularly (46%) support this position. Some pupils use the fact that teachers are allowed to smoke on the school premises as a justification of their own right to smoke.

3.7.2.1.2. Responsibilities of the school.

There are some pupils, mainly older ones who smoke, who think that the school is not responsible for the pupils and cannot, thus, interfere with their smoking. For example, a 15-year-old girl who smokes occasionally says that: “it’s the parents’ and not the school’s concern what the pupils do”. A 15-year-old boy who smokes regularly says that: “pupils have the right to smoke. It is the obligation of the parents and not of the teachers to check whether their children should be allowed to smoke on the school premises”. An issue that is raised by this argument is that of rights and the role of the school in Greek society. According to some pupils the role of the school does not extend to the health and habits of the pupils, since schools are public and smoking is not banned in most public places.

Moreover, since smoking is allowed almost everywhere, there are some pupils who believe that banning smoking on the school premises is not the right answer. For example, a 15-year-old non-smoking girl says that: “the pupils will smoke

secretly anyway”. Another 15-year-old non-smoking girl says that: “it doesn’t matter where the pupils smoke, but why”. A 15-year-old girl who smokes regularly wonders: “pupils will smoke, even secretly, so why forbid it?”. It is mostly older pupils (89%) of both sexes who smoke occasionally or regularly (55%) who believe that prohibition of smoking on the school premises is not the answer to the problem.

3.7.2.2. Teachers and pupils should not be allowed to smoke on the school premises

3.7.2.2.1. Respect for work

The teachers have to make sure that their behaviour does not affect their work. There are some pupils who do not mind their teachers smoking, as long as it does not seem to affect their performance at work. For example, a 15-year-old boy who smokes occasionally says that: “since many teachers and pupils smoke on the school premises, I am not bothered by the idea that teachers smoke – as long as smoking does not affect their work”. A 15-year-old non-smoking girl says that: “I don’t mind seeing teachers smoking. They are paid to teach the pupils certain things. I do not believe that smoking cigarettes influences the way that teachers work. A teacher who smokes is not bad at his/her work”. This concern is shared equally by boys (46%) and girls (54%) of all smoking statuses (39% non-smokers, 39% experimented with smoking one and 22% occasional/regular smokers). Older pupils (77%) seem to think that smoking affects their teachers’ work more than younger pupils do.

3.7.2.2.2. Respect for the school environment

The teachers have to show respect for their job, the pupils and the school environment. Most children have learnt since their first day as pupils that they must show respect for the school and their teachers. They have learnt that school is the place where they go to get educated and to learn values that will guide them through life. Based on this belief there are many pupils who advocate that their teachers should not be allowed to smoke on the school premises. Their opinions are illustrated in the following statement: A 15-year-old non-smoking boy says that: 'keeping the teachers from smoking on the school premises is necessary, since school is a place for learning. Moreover, it would be the first step in the fight against smoking'. The concept of respect is more common among non-smoking (67%) male pupils of both age groups. Smokers and girls do not emphasise the concept of respect as a reason not to smoke on the school premises.

There are many participants who believe that pupils should exhibit the same respect for their school, their teachers and their schoolmates and refrain from smoking on the school premises. For example, a 12-year-old non-smoking girl says that: 'we all know that this age (12-13) is the most critical one. Should we smoke or not? My answer to this question is that pupils should not be allowed to smoke at least on the school premises because then they will get involved with drugs and create many problems at school. School should always be respected'. This view is shared equally by pupils of both sexes and age groups and of all smoking statuses

3.7.2.2.3. Health issues

The teachers are obliged to care about the health of their pupils who become passive smokers when they are exposed to their cigarette smoke. It is quite clear that some pupils are concerned about the fact that they might become passive smokers. There are some pupils who believe that their teachers should refrain from smoking. It is argued that smokers destroy not only their health, but also the health of the people around them who become passive smokers. It is quite interesting that even the younger pupils seem to be aware of the term “passive smoker” and what it entails. This is a concern that a 12-year-old non-smoking boy voices: “I do not want the teachers to smoke because the lungs absorb the smoke and this results in cancer and diverse infections. Thus, I do not like to inhale their smoke”. More boys (73%) than girls (27%) share this concern of becoming a ‘passive smoker’. It is more prevalent among the younger pupils (95%) and the ones who have never smoked (60%).

Pupils must show some concern for the welfare of their classmates as well as their own. The notion that pupils who smoke jeopardise their health and the health of their classmates is widespread and expressed mainly by non-smoking boys and girls of both age groups. For example, a 12-year-old non-smoking boy says that: “normally, pupils should not be allowed to smoke on the school premises, not only because they ruin their health, but also because we – the rest of the children – should not be subjected to inhaling”. This concern is shared mainly by male (69%), younger (85%) and non-smoking pupils (39%) or the ones who have experimented with smoking once (61%).

It is interesting to note that although some pupils are aware of the fact that their teachers jeopardise their health, they state that they do not care whether their teachers smoke or not and that they feel that there is nothing they can do about it. More precisely, a 15-year-old non-smoking boy wonders: “if the teachers do not realise that they are harming their health, what can I do? How can I persuade them? Besides, I have grown used to it since most of my teachers smoke like chimneys”. This indifference could be partly due to the way that Greek society is structured. People are not ‘allowed’ to interfere with the way that other people behave, even if they do not agree with it (see the section in the introductory chapter on the Greek cultural and social values in this area).

3.7.2.3. Uncertainty about whether smoking should be allowed on the school premises or not

It is worth noticing at this point that the issue of freedom and rights may confuse some of the pupils, since they acknowledge their existence but they believe that teachers and pupils should still not be allowed to smoke. Their confusion and ambivalence is illustrated in the following utterance. A 15-year-old boy who smokes regularly says that: “I am not sure whether teachers should be allowed to smoke on the school premises, because if we don’t allow them we deprive them of their freedom and if we do, then we may create a bad example for young pupils, who may feel the urge to smoke as well”. This ambivalence appears in both male and female older pupils, of all smoking statuses. It could, thus, be stated that freedom, human rights and democracy are concepts that are used in order to justify a certain behaviour, but may also lead to confusion, since some

times people are free to do something that bothers other people. And this is a 'social problem' in Greece.

There are some pupils who are concerned not so much with whether the teachers will smoke on the school premises but with where they would smoke. They think that if teachers smoke they shouldn't do so in front of the pupils, but in a specially designated area. A 15-year-old boy who smokes occasionally says that: "teachers should be allowed to smoke on the school premises providing that they do not smoke in the classroom during the lesson. They should smoke outside the classroom as do most pupils". A 12-year-old non-smoking girl says that: "I think that teachers should not be allowed to smoke on the school premises. If they absolutely have to smoke, though, there should be a special smoking room for the teachers". Girls (62%), older pupils (71%) and occasional smokers/people who experimented with cigarettes once (76%) share this concept. It is plausible that this idea of teachers' smoking in a specially designated area is linked to the respect that they must show and to the health risks involved for the pupils who are passive smokers.

3.7.2.4. The responsibilities of the school

There are, though, some younger non-smoking pupils who believe in the power of prohibition. A 12-year-old non-smoking girl says that: "prohibition is not punishment. We want to protect and warn the pupils before they are harmed by cigarette smoking". Most schools seem to share this belief. They feel responsible for the smoking behaviour of their pupils and they are suspended and their

parents notified if they are caught on the school premises. This is something that can make some pupils hesitant about smoking at school. So, in many cases the school policy and the attitude of teachers towards pupils smoking seems to be of importance in the shaping of the smoking behaviour of the pupils and their attitude towards smoking on the school premises. More specifically when the school seems to be quite strict and to have set rules regarding the treatment of pupils smoking, the impression that is conveyed to the pupils can be outlined by the following statements. A 15-year-old girl who smoked once says that: “pupils must not smoke at school because if our parents do not know that we smoke and our teachers see us they will notify our parents. Moreover, our teachers would form a bad opinion of us”. A 12-year-old non-smoking boy says that: “pupils should not be allowed to smoke on the school premises, because if they are caught they might be suspended”. A 12-year-old girl who smokes occasionally says that: “pupils should not smoke on the school premises because if the teachers see them they will hate them, suspend them and notify their parents’. Younger (88%) girls and boys of all smoking statuses share this ‘fear’ that the pupils who smoke may be suspended. It is also interesting that there is no differentiation according to the school that the pupils attend.

3.7.2.5. Social Acceptability of Smoking

Since school is a ‘small society’ it is important to see whether smoking is considered to be a form of socially acceptable behaviour. If smoking is acceptable in the wider community, then it is possible that it becomes more acceptable in the school context and thus ‘justifies’ the choice of some of the

pupils to take up the habit of smoking. According to three-quarters (75%) of the respondents, smoking is part of socially acceptable behaviour. Pupils are asked why they think that smoking is socially acceptable and the most common answer is: because everybody smokes and nothing is done to stop it. The fact that smoking is allowed almost everywhere and that nobody gets punished for smoking strengthens the pupils' belief that smoking is indeed socially acceptable. A statistically significant association between the pupils' smoking behaviour and their belief regarding whether smoking is a socially acceptable or not ($\chi^2=12.61$, $df = 3$, $p<.005$) provides support for the theory of reasoned action and cognitive dissonance. Non-smokers tend to believe that smoking is socially unacceptable, while occasional and regular smokers think that smoking is socially acceptable (Table 44).

Table 44. Percentage of pupils' smoking behaviour by their belief regarding whether smoking is a socially acceptable behaviour or not

Pupils' Smoking Behaviour	Smoking a socially acceptable behaviour (N=505)	Smoking <u>not</u> a socially acceptable behaviour (N=167)
Non-smoker	57.9%	68.5%
Smoked once	18.1%	20.2%
occasional smoker	12.1%	6.5%
regular smoker	11.9%	4.8%

The perception of smoking as part of socially acceptable or unacceptable behaviour must be influenced to some extent by the different areas of social experience that have already been discussed – parents, friends, teachers and school environment. In order to gain more insight into pupils' opinions they are asked to justify them.

One third of the interviewed pupils (34%) say that smoking is socially acceptable because everybody smokes. A 15-year-old non-smoking boy says that: “smoking is socially acceptable since in Greece a large percentage of people smoke, while non-smokers cannot express their dissatisfaction or may be afraid to do so”. A 15-year-old non-smoking girl says that: “smoking is socially acceptable, since smoking nowadays is an element of everyday life. I do not think that anyone would react when he/she sees someone else smoking. He/she may think that it is bad for his/her health, but he/she will not think that it constitutes a behaviour that offends society”. A 12-year-old non-smoking girl says that: “smoking is socially acceptable since everybody everywhere can be seen holding a cigarette. It has become a habit and something given”. A 12-year-old boy who tried smoking once says that: “smoking is socially acceptable because a high percentage of people smoke without being treated any differently from non-smokers”. It is true that the percentage of adults who smoke is around 25%, but this does not mean that ‘everybody smokes’ as many pupils said. Many pupils foster this misconception which may be caused by the fact that they are exposed to smoking models in their close environment. If smoking relatives, friends and teachers surround the pupils, then they may reach the conclusion that the majority smokes. Besides, people who smoke seem to stand out more than the ones who do not. This is where the theory of ‘social-learning and modelling’ may be able to account for this phenomenon, which may be linked to pupils’ perceptions of whether their parents/friends/teachers have negative or positive attitudes towards their smoking and to their views about appropriate school rules and practices.

There are also many pupils who advocate that smoking is a socially acceptable behaviour because smoking is a habit/way of life and all people – especially adults - have the right to smoke. Many pupils feel that smoking is a socially acceptable behaviour because non-smokers feel that they cannot deprive smokers of their right to smoke, irrespective of the right that they have not to inhale the smoke. A 15-year-old boy who smokes regularly says that: “smoking is socially acceptable since nobody has the right to deprive someone else of the right to smoke”. A 15-year-old boy who is an occasional smoker says: “look around you. No matter where you go, there are at least three people who are smoking and nobody around them does anything to stop them”. A 12-year-old non-smoking boy says: “frequently a lot of smoking relatives (aunts and uncles) come to my house and although my father has quit smoking, he doesn’t dare say anything”. This attitude could again be a by-product of the way that the Greek society seems to act in certain areas. People do not feel free to express their dissatisfaction with a certain behaviour – be it forbidden or not in the specific area - even if it bothers them.

A quarter of the pupils believes that smoking is not a socially acceptable behaviour. A 12-year-old non-smoking girl says that: “smoking is not socially acceptable because we see the warning of the Ministry of Health that smoking is bad for our health written under the cigarette advertisement”. A 15-year-old boy who smokes regularly says that: “smoking is not socially acceptable since our society has not overcome some taboos – especially for children under the age of 18”. A 12-year-old non-smoking girl says that: “smoking is socially unacceptable because it is very irritating when people around you smoke and often fights and

disputes are caused by people who smoke in public places”. A 12-year-old non-smoking boy says that: “smoking is not socially acceptable because there are people who do not like it and wish that it was forbidden in some places”. It is obvious that even the pupils who believe that smoking is not socially acceptable site examples that show that smoking is allowed everywhere and that non-smokers cannot do much to change this.

3.8. Smoking Prevalence and Knowledge

It is found that the vast majority of pupils (90%) are very well informed on the consequences of tobacco/cigarettes on health. A statistically significant relationship between the sex of the pupils and their knowledge of the facts about smoking is found ($\chi^2 = 8.05$, $df = 2$, $p < .05$). Girls seem to be better informed than boys on the effects of tobacco on health as shown in Table 45.

Table 45. Percentages of the knowledge on the facts about smoking by the gender of the pupils

knowledge on the facts about smoking	boys (N=341)	girls (N=331)
not well informed	0%	0%
adequately informed	14%	7%
very well informed	86%	93%

Another finding of the present study is that there is a statistically significant relationship between the smoking behaviour of the students and their perception of how well they know the facts about smoking and cigarettes ($\chi^2 = 14.86$, $df = 6$, $p < .05$). Pupils who have experimented with cigarettes or are occasional or

regular smokers are more likely to believe that they have an adequate knowledge base about the facts about smoking than their non-smoking counterparts.

It is also found that there is a statistically significant relationship between how well informed about the facts regarding smoking pupils think they are and how well informed they actually are – as measured by a set of statements regarding facts about smoking/cigarettes ($\chi^2 = 10.15$, $df = 4$, $p < .05$). Most pupils – including occasional and regular smokers – seem to have a fairly accurate perception of the amount of facts that they know regarding the effects of cigarettes/tobacco on health. These results do not support Festinger's theory that smokers' knowledge is distorted and that this is how they handle their dissonance.

Issues related to the health of the teachers have been raised as a potential reason why pupils do not like their teachers to smoke. This is an indication that pupils are aware of the health risks associated with smoking. A 12-year-old non-smoking boy says that: "I think that teachers should not smoke because it does not offer anything positive and on top of that it is very bad for their health". These health issues seem to concern only the non-smokers (50%) and the pupils who experimented with smoking once (50%). Boys (67%) and younger pupils (67%) are the ones who are more concerned about health issues related to smoking.

Almost 20% of the pupils state that health issues are involved in their decision not to accept the offer of cigarettes when in the presence of others or not to try

smoking a cigarette on their own. A 12-year-old non-smoking boy says that: “I will never accept any offer to smoke cigarettes because I love myself and my life and, thus, I do not want to harm my health”. Another 12-year-old non-smoking boy says that: “I see many people suffering from cigarettes. They suffer because they did something stupid when they were younger. When I look at them I do not think that I will ever want to try a cigarette”. A 12-year-old non-smoking boy says that: “I do not want to smoke because it is bad for health and I am afraid that if I smoke one cigarette one day, maybe then I will smoke 2-3-4 cigarettes and so on and I will destroy my health”.

Cigarette-related health problems experienced by the pupils themselves or members of the family and friends tend to give them a negative attitude towards smoking. A 15-year-old non-smoking girl says that: “my attitude towards smoking was always a negative one. A fact that contributed to it even more was that my grandfather had an operation on his vocal cords and now he cannot talk because of cigarettes”. A 15-year-old non-smoking girl says that: “a family friend died of lung cancer. He was an obsessive smoker. This fact literally shook me and made me adopt a more condemning attitude towards smoking”. A 15-year-old boy who smokes occasionally says that: “when I started smoking I realised that I had less physical strength and that the consequences of smoking appear at an early stage”. Another 15-year-old non-smoking boy says that: “both my grandfathers died of cancer a few years ago. This year, though, I had the chance to consider this fact and decide that the right thing is not to smoke”.

Many pupils believe that these health problems and risks must be addressed in an anti-smoking campaign. They also think that it is important to be provided with more details and information on the kinds of diseases that can be caused by cigarettes and their nature. A 12-year-old non-smoking girl says that: “the damage that smoking causes to the body of the people that smoke (active smoker) and the damage that smoking causes to the people who tolerate the smoke (passive smokers) should be taken seriously”. A 15-year-old non-smoking boy says that: “it should be stressed how bad it is for health and how much damage it can cause according to the age and the amount of cigarettes smoked”. A 15-year-old non-smoking girl says that: “the state of the smokers’ health through the projection of pictures that show their organs (liver-lungs) after they start smoking should be stressed. These pictures may shock and deter people from smoking”.

Health risks seem to puzzle pupils and prevent some of them from taking up smoking in the future. Most of the pupils who claim that they will not start smoking in the future under any circumstances say that their decision is based on the fact that they are aware of the consequences of smoking on health and want to avoid them. A 12-year-old non-smoking boy says that: “I will never smoke in the future because I believe that smoking is entirely useless and harmful”. A 15-year-old non-smoking boy says that: “I don’t think there is a chance that I might smoke in the future, since I am aware of the consequences that smoking may have on my health”. A 12-year-old girl who experimented with smoking once says that: “I will not smoke in the future, because I want to be healthy and live to be more than 100 years old”. A 12-year-old non-smoking girl says that: “I will

not smoke, because I know the consequences of smoking and I don't want anything to happen to me".

Being involved with sports and a healthy lifestyle seems to deter pupils – especially younger boys - from becoming smokers, even if they do experiment with cigarettes. A 12-year-old non-smoking boy says that: "I turned down cigarettes mainly because I am an athlete". Another 12-year-old boy who experimented with cigarettes once says that: "I did not want to start smoking because I am an athlete and when I tried smoking once I realised that it really did not have anything to offer".

It should be pointed out, though, that there are quite a few pupils who are able to identify the statements that were given to them as right or wrong, but they are not aware of the medical terms used. For example, while completing the questionnaire, a 12-year-old non-smoking girl says that she knows that smoking can affect asthma and bronchitis, but she does not know what asthma and bronchitis are. This incidence is encountered in a number of situations. There are even some pupils who write their questions at the end of the questionnaire. This is evident also in the second part of the study, where the pupils who are interviewed are asked if there is anything that they wish to know about the facts regarding smoking. A quarter of the pupils want to learn more about the consequences that smoking has on health. They want to know what exactly nicotine is, what asthma - bronchitis – cancer are, how smoking influences the foetus, if 'light' cigarettes differ from the other cigarettes, what is the purpose of the filter and what are the consequences of smoking on passive smokers. They all

know that ‘smoking affects asthma and bronchitis’ and ‘causes cancer’. They know that ‘if a pregnant woman smokes, she can harm the baby’ and that ‘being in the same room with someone who smokes a lot can make you feel sick’. Most of them do not know that ‘there are drugs in the cigarettes’, since they do not know what nicotine really is. This should be taken into consideration when designing a prevention/intervention programme.

This lack of knowledge is evident also in the issue of addiction, which is very controversial. There are many pupils who do not know whether smoking is addictive or not. The pupils who believe that smoking is not addictive are not able to justify the teachers’ and pupils’ need to smoke, especially on the school premises. The pupils who adopt the view that smoking is addictive can understand the teachers’ and pupils’ need to smoke. This tendency can be detected in the opinions that some of the pupils express regarding smoking on the school premises.

Some of the interviewed pupils who consider cigarettes to be addictive think that their teachers should be allowed to smoke. A 15-year-old girl, who smokes regularly, says that: “teachers should be allowed to smoke on the school premises since smoking is addictive. If the teachers are addicted and they cannot smoke, maybe they will get very jumpy and this might have negative consequences on the pupils. Of course all this is just a theory since all my teachers smoke at school”. Another 15-year-old girl, who smokes regularly, says that: “teachers should and do smoke on the school premises because smoking is a need that does not discriminate between time and place”. A 15-year-old boy who is a regular

smoker says that: “it is very difficult to quit smoking and abstain from smoking for 7 hours, which is why teachers should be allowed to smoke at school”. Especially older (86%) and regularly smoking pupils (57%) tend to think that teachers are addicted to cigarettes because they have been smoking for many years. Addiction could be used as an ‘excuse’ for people to smoke, since the term implies that the situation is out of control.

The picture is quite different in the case of pupils’ addiction. There are only two 15-year-old pupils – a boy and a girl - who smoke regularly and believe that: “it is very difficult to quit smoking and to abstain from smoking for 7 hours, which is why pupils should be allowed to smoke at school” and that: “if a student is addicted to cigarettes, he/she cannot abstain from it for 6 hours. Even if he/she is not allowed to smoke, he/she will do so secretly”.

On the other hand, there are three non-smokers who share the belief of a 16-year-old boy who smokes occasionally and supports that: “pupils should not be allowed to smoke on the school premises. Besides, I do not believe that a 16-to-17- year old needs a cigarette that much, that he/she cannot stay without one for 7 hours”. Pupils tend to think that teachers are addicted to cigarettes because they have been smoking for many years. The pupils, on the other hand, have not been smoking for such a long time and are, thus, considered to be in lesser need of a cigarette. However, it should be mentioned that there is evidence in the literature that supports the notion that especially older adolescents who smoke a lot of cigarettes experience a feeling of addiction and that some of them have tried to quit or reduce smoking without being successful. This debate on whether

smoking is addictive or not is very lengthy and perhaps the important thing is how smokers perceive smoking. Even if smoking is not physiologically addictive, if they perceive it as such, they will have more trouble giving up smoking. Older pupils (83%) who smoke occasionally (50%) or regularly (49%) support the notion of addiction. More information on whether cigarette smoking is addictive or not and ways of dealing with the addiction – if it exists - could be useful in the effort to prevent or reduce smoking.

It is of interest to identify the sources of information that pupils have in order to learn where they gain their knowledge from.

3.8.1. Sources of Information

The sources of information regarding the effects of smoking according to the pupils are the following (in order of frequency): parents (85.6%), the mass media (6.8%), other sources (3%), friends (2.4%) and school (2.2%). These results (Table 9) indicate that parents are regarded as an important source of information. It is noteworthy that school is the last source of information, a fact that may be due to the lack of a formal educational policy that should be included in the Greek curriculum system (Davou, 1992).

The influence that family and friends exert on the attitudes towards smoking has already been explored. It would be useful to examine the role of Mass Media as a source of health education/influence. A 12-year-old non-smoking girl says that: “I saw a film about smoking and I realised that smoking is worse than I thought.

It is not cool. It's useless and bad for us". A 15-year-old boy who smokes occasionally says that: "I saw pictures of smokers, who suffered from cancer or heart problems on TV". A 15-year-old non-smoking boy says that: "facts were shown on television, that detailed the health problems of smokers". A 12-year-old non-smoking girl says that: "I read a book that describes the consequences of cigarettes and drugs. It was so shocking, that I think that I will never smoke as I will remember the words that I read". A 12-year-old non-smoking girl says that: "I read in the newspaper that a young girl, aged 14, smoked for the first time and later on had very serious health problems (asthma and bronchitis)". A 12-year-old non-smoking boy says that: "I saw a documentary on the diseases caused by cigarettes on TV and I hate it even more". Finally, another 12-year-old non-smoking boy says that: "usually, when I have spare time I watch the news and I learn more frightening things about smoking that make me hate it even more".

Maybe some of these programmes or documentaries that are shown on television and the articles in newspapers can be used as part of an intervention programme, since they are proven to have an impact on some adolescents. If not, ideas about the design of other material could derive from them. It should not be forgotten, though, that the Mass Media through the projection of pictures of smokers and cigarettes advertisements create a positive image of smoking that may lead some adolescents to experiment with smoking. This notion is apparent in the words of a 15-year-old boy who smokes occasionally and says: "Smoking is socially acceptable, since everywhere you go you see smoking advertisements".

At this point it would be appropriate to examine the role of the school as a source of information on the facts about smoking. A 12-year-old non-smoking girl says that: “there was a class in biology that demonstrated analytically the harm that can be caused by smoking. This made me even more cautious about smoking”. Another 12-year-old non-smoking girl says that: “in the context of the biology class, I learnt more about all the illnesses that are caused when you smoke a lot and for a long period of time”. Another 12-year-old non-smoking girl says that: “during the biology class, we were taught that smoking is very harmful and that the people who smoke have an increased chance of an early death.”. A 12-year-old non-smoking girl says that: “what we have learnt in school made me feel disgusted by smoking”. These views are expressed as a response to a question about if anything had happened during the academic year that changed the pupils’ attitudes towards smoking.

It should be remembered that only one of the schools claims that it made an effort to inform the pupils about the facts concerning smoking using as an ‘excuse’ the relevant chapter in the biology course book. Although the same book is taught in all schools, no such effort is reported in any of the other schools. Non-smoking girls refer mainly to this lesson. It does not seem, though, to have any impact on the overall smoking behaviour of the pupils of the school in question (as seen in the section of the influence of school). However, this finding does stress the importance of the formation of a consistent health education curriculum. The pupils are asked who should be responsible to carry out this difficult task of implementing a Health Education curriculum in schools. Their answers are summarised in Table 46.

Table 46. Percentages of proposed 'health educators'

	N=150	%=100
expert*	56	37
GP	37	25
teacher**	35	23
non-smoker	13	9
ex-smoker	9	6

* The expert is identified as a psychologist or a doctor who specialises in patients who suffer from diseases caused by cigarette smoking.

** The teacher should be trained and there is a preference for P.E. teachers and for science teachers.

It is quite evident that the pupils would like to have advice from people who have some training and a good knowledge of the facts that are associated with smoking. There are a few pupils who would prefer ex-smokers to talk to them about their experience with cigarettes.

3.9. Smoking Prevalence and Personal Factors

There are many personal factors that play a very important role in the adolescents' decision to take up smoking or not. Sometimes these factors may be influenced by significant others, while other times they are independent of any external influences. Some of these factors become evident when the pupils are asked to identify what they think that smoking has to offer. Their answers - shown in Table 47 - demonstrate that more than half of the respondents (58%), boys and girls of both age groups and all smoking statuses believe that smoking cigarettes has something to offer to the individual.

Table 47. Percentages of perceived 'offer' of cigarettes

	N=150	%=100
peace and pleasure	34	23
health problems	31	21
nothing	31	21
security / self-esteem / feeling of being 'cool'	26	18
habit / occupation	17	11
company	11	7

3.9.1. Peace and pleasure

Many pupils seem to feel stressed because of the problems that they face in their daily life. Some of them decide to take up smoking in an effort to forget their problems and feel relaxed again. A 12-year-old girl who smokes occasionally says that: "smoking offers psychological peace. I think that it is better for someone to resort to cigarettes than to psychoactive drugs". A 15-year-old boy who smokes regularly says that: "smoking is a means of breaking free from something that makes you angry or causes you a lot of anxiety". A 15-year-old girl who smokes occasionally says that: "I increased the number of cigarettes that I smoked due to the stress that I experienced because I was afraid that I would not do well in the exams".

There are also some pupils who claim said that they will smoke in the future if they feel stressed and are facing problems. A 12-year-old non-smoking boy says that: "I will smoke if I feel extremely upset". A 15-year-old non-smoking girl says that: "I will smoke under circumstances of extreme stress and maybe sadness. Maybe also during the GCSE exams, when the stress is tremendous, since my future is at stake". A 15-year-old girl who smokes occasionally says

that: “I will smoke regularly. It is a way of getting away from problems, which is why it is difficult to quit”. A 12-year-old non-smoking boy says that: “I will smoke only if I am miserable and a failure for many years”.

Finally, personal problems seem to be associated with the experimentation with smoking. A 12-year-old girl says that: “I took up the offer to smoke because she was emotionally charged due to a personal problem”. A 15-year-old boy who smokes regularly says that: “I bought the first pack of cigarettes in order to try smoking during a period of my life that I had serious problems with my family environment”.

3.9.2. Feeling of being ‘cool’ / security / self-esteem

There are many pupils who consider smoking to be a sign of being cool and that it increases their self-esteem. A 12-year-old non-smoking girl says that: “I believe that cigarettes offer nothing more than the sensation that you have grown up. Many children consider it to be a sign of acting ‘cool’”. A 15-year-old non-smoking boy says that: “smokers do not have strong enough characters and they feel better and more important when they smoke”.

Some adolescent pupils are eager to engage in adult behaviour - since it increases their self-esteem - and smoking is an acceptable form of behaviour for adults. A 12-year-old non-smoking girl says that: “After growing up - and I mean after the age of 18 - I may try to smoke”. A 12-year-old non-smoking girl says that: “I believe that I may smoke a couple of cigarettes – maximum – per day, but over

the age of 35". A 15-year-old boy who smokes regularly says that: "I will smoke when I join the army and am over 18". A 12-year-old non-smoking girl says that: "when I graduate and there will be no limitations (from parents and teachers) I will smoke". Another 12-year-old non-smoking girl says that: "if I am going to smoke, I will do so after I graduate from lyceum. Then I will be an adult".

3.9.3. Habit / Occupation

There are some pupils who believe that smoking is a habit and is a way to spend your time. It should be mentioned that the notion of habit may be related to some extent with the notion of addiction. A 12-year-old non-smoking boy says that: "I think that for those who smoke, a cigarette offers something to occupy time and in some cases it is also a habit".

3.9.4. Company

A cigarette can constitute a friend for some adolescents, which can help them overcome their loneliness. A 15-year-old girl who is an occasional smoker says that: "sometimes I light a cigarette when I feel lonely, because I feels as if I have a friend next to me". Another 15-year-old boy who smokes regularly says that: "Sometimes when I stay up at night to study, I light a cigarette so that I will not feel lonely".

3.9.5. Own initiative / decision

Some pupils claim that the decision to experiment with smoking is entirely their own and that they are not influenced by anybody. A 15-year-old girl who smokes regularly says that: “I decided to start smoking on my own. I went out, bought a pack of cigarettes and smoked the first”. The pupils who decide to experiment with cigarettes on their own seem to keep up the smoking habit and to be more determined and informed about their choice and its consequences.

A high percentage of pupils (39%) say that the decision to smoke or not is entirely their own and that nobody can or has influenced them. A 15-year-old non-smoking boy says that: “I turned down the offer to smoke cigarettes because I respect myself. It is ‘cool’ not to smoke and not the other way around”. A 15-year-old girl who smokes occasionally says that: “I did not accept the offer to try a cigarette because I wanted to feel accepted. I just wanted to smoke and I did it. I experimented with cigarettes”. A 12-year-old non-smoking boy says that: “I decided to turn down the offer to smoke a cigarette for two reasons. First, because I am too young and second because my parents smoke and I inhale it and I know how awful it smells”. Of course in this case there is always the question ‘what is influence’ and how can it be measured? Influence is a subtle business, not always consciously acknowledged.

The fact that some pupils seem to be afraid to lose control of their smoking is an indication that they consider smoking to be their own decision. This fear makes them reject the possibility of taking up smoking in the future. A 12-year-old non-

smoking girl says that: “a lot of my friends started smoking and I can see that they have become dependent on it. This is why I will never smoke in the future”. A 12-year-old non-smoking boy says that: “I observed that many of my classmates became addicted to cigarettes. This made my decision not to smoke even firmer”. A 15-year-old non-smoking boy says that: “one of my teachers started to smoke and now I can see how addicted he is to cigarettes, which is why I decided that I will never smoke”. A 12-year-old non-smoking boy says that: “I do not think that I will ever smoke in the future since I do not want to depend on anything and in particular on smoking”. This fear of losing control may also be linked with the notion of ‘addiction’.

3.9.6. Curiosity

Curiosity seems to be another factor that leads young people to experiment with cigarettes. It is widely acknowledged that adolescence is characterised by the tendency to try out new things. A 12-year-old boy who experimented with cigarettes once says that: “I accepted the offer to smoke a cigarette out of curiosity. I wanted to see what kind of pleasure this ‘stupidity’ offers, but when I smoked it I understood that it is nothing but a bad habit that most people adopt just to appear cool”. A 15-year-old boy who experimented with cigarettes says that: “I wanted to try out of curiosity. So, I bought a pack of cigarettes and I enjoyed it initially, but when I got through my first pack I swore never to smoke again”. A 12-year-old girl who smokes occasionally says that: “I accepted the offer out of curiosity, because I heard that smoking helps you forget”. Although the curiosity to experiment with different substances seems to be inherent in

adolescence, the unknown, the challenge and the myths that surround the consumption of cigarettes seem to intensify this curiosity.

There are some pupils who say that they will try to smoke in the future out of curiosity. A 12-year-old non-smoking boy says that: “I may smoke out of curiosity, just to see how it is”. A 15-year-old non-smoking girl says that: “I will smoke when I go to university out of curiosity”. A 15-year-old non-smoking boy says that: “I will smoke in the future because I want to see what this thing is that everybody talks about”.

3.9.7. Situational factors

Sometimes the acceptance or the refusal of the offer to smoke depends entirely on the situation. A 12-year-old girl who smokes occasionally says that: “I turned down the offer to smoke several times because I did not feel like it at that particular moment. One time it felt right, so I took up smoking”. A 15-year-old girl who experimented with cigarettes once says that: “I just happened to be in the wrong place on the wrong day”. A 15-year-old boy who smokes occasionally says that: “I accepted the offer because I believed that I might feel better. Other times I turned down the offer because I did not feel like smoking and did not want to”. This situational factor is probably present in more examples of experimentation conditions, but it is not as clearly stated.

3.9.8. Maturity

Maturity is another important personal factor, which constitutes a debate. The respondents argue whether the pupils are mature enough to smoke or not. Older pupils tend to believe that the pupils are mature enough to be able to decide whether they will smoke or not having taken into consideration the consequences of smoking on health. This trend is expressed clearly by a 15-year-old boy who smokes regularly and says that: “the pupils who attend lyceum should be allowed to smoke because they are considered to be mature enough to realise the consequences of what they want to do”.

On the other hand, there are some pupils, especially the younger ones, who advocate that the pupils are not mature enough to realise the consequences of smoking and the trouble that they get in to. A 12-year-old non-smoking girl says that: “pupils should not be allowed to smoke on the school premises because they are too young to get caught up in the net of smoking”. These opinions are held equally by both sexes. Occasional and regular smokers (36%) tend to support the first opinion, while non-smokers (55%) show support for the second opinion.

Many people tend to downplay the importance of these personal factors and the personal satisfaction that they may offer to the pupils who smoke. Some argue that the adolescents reproduce some phrases that adults use to justify their smoking. Even if this is the case, they believe that these effects are real and they experience them as such. So, it is important to listen carefully to and focus on each one incorporate them into a prevention/intervention programme and perhaps

to teach the pupils other skills and activities that can have the same impact on them. It is equally significant to acknowledge that many of the smokers do not seem to suffer from ‘cognitive dissonance’ since they can justify their smoking when needed – at least to themselves.

3.10. The pupils who changed their smoking behaviour during the academic year

Out of the 672 young people who participated in the study, 132 (20%) – 54 aged 12-13 and 78 aged 15-16 - have changed their smoking behaviour during the academic year (Table 3). The next step of the analysis is to focus on these pupils. It was found that 54 of them were attending gymnasium and 74 attended lyceum. There were 72 girls and 56 boys. One of the most important ‘discoveries’ that derives from this analysis, is that there are some subtle changes in the smoking behaviour of the respondents that cannot be detected without further investigation. For example, there are some pupils who smoked occasionally and still do, but they have decreased the number and the frequency of their smoking. They still fall under the category “occasional smokers”, but there is a change in their smoking behaviour. This is a limitation of the categorisation system of adolescent smoking employed in this study. But it is the only one that could be used under the circumstances – since a large scale survey requires quantitative methodology - and there is an acute awareness of its weakness to detect some very subtle changes in the smoking behaviour of some of the respondents.

3.10.1. Gender

There is no statistically significant association between the gender of the adolescents and the change in their smoking behaviour ($\chi^2=.21$, $df= 2$, $p>.05$). It seems that both boys and girls have changed their smoking behaviour during the academic year. There is, though, a statistically significant difference between the age groups ($\chi^2=24.4$, $df= 2$, $p<.001$). Most 12-13 year-olds move from non-smoking to experimentation with cigarettes, while most 15-16 year-olds move from experimentation to occasional smoking and from occasional to regular smoking. This finding was expected, since most 12-13 year-olds are non-smokers to begin with and there are more 15-16 year-olds who have experimented with smoking. It also provides support for the theory of stages, since most pupils move from one stage to the next, without making any big leaps. There is, therefore, a strong indication that there are separate steps on the way to becoming a regular smoker. This information could prove to be very useful when designing an intervention or prevention programme.

3.10.2. Parental influence

Parental influence and modeling do not seem to have any effect on the change in the adolescents' smoking behaviour. More precisely, it is found that there is no statistically significant association between the change of smoking status and the perceived parental attitude towards the adolescent's smoking ($\chi^2=5.62$, $df= 4$, $p>.05$). Despite the fact that most adolescents perceive their parents as having a negative attitude towards their smoking, they do experiment with smoking or move on to occasional or regular smoking. The same is true for parental smoking as well. There is no statistically significant association between the change of

smoking status and parental smoking ($\chi^2=1.37$, $df=2$, $p>.05$). The parents' smoking behaviour does not seem to influence their children's decision to experiment with cigarettes or to increase the amount of cigarettes that they smoke.

3.10.3. Siblings

The smoking behaviour of the siblings does not appear to have any impact on the change of the smoking status of the participants, since no statistically significant association is found ($\chi^2=3.97$, $df=4$, $p>.05$). This finding does not support the notion that smoking siblings constitute a factor that influences adolescent smoking. This is consistent with the fact that the siblings are never present in the experimentation with cigarettes and they never offer a cigarette to the participant, in contrast to the parents, who are sometimes the ones to give the adolescent their first cigarette to try.

3.10.4. Friends

However, the impact of friends is more substantial. There is a statistically significant association between the change of smoking status and the amount of friends who smoke at phase one ($\chi^2=23.80$, $df=2$, $p<.001$) and at phase two ($\chi^2=159.72$, $df=3$, $p<0.05$). The adolescents who become occasional or regular smokers at phase two have smoking friends in the majority of cases at phase one and at phase two, in comparison to non-smokers at phase one. The fact that having smoking friends precedes an increase in smoking is suggestive that friends are influential in young people's smoking behaviour, rather than the

association being one that merely denotes peer preference. This is consistent with some of the comments made at interview.

Moreover, there is also a statistically significant association between the change of the smoking status and the perceived attitude of the friends towards the adolescent's smoking at phase one ($\chi^2=10.53$, $df=4$, $p<.05$) and at phase two ($\chi^2=20.22$, $df=4$, $p<0.001$) (Table 48). The adolescents who experiment with smoking between phase one and two tend to believe that their friends have a negative attitude towards their smoking in comparison to smokers both in phase one and in phase two. This may account for the fact that some of them do not take up smoking in the end. The young people who increased the amount of cigarettes that they smoke believe that their friends have a neutral attitude towards their smoking at phase one, while at phase two they perceive them as having a more neutral or positive attitude than at phase one. This is indicative of the fact that a change in the smoking behaviour of the adolescents leads to a change in their perception of their friends' attitudes towards their smoking. These findings further support the theory of stages, since it seems that the young people who move on from experimentation to occasional/regular smoking make some necessary cognitive adjustments for the transition to the next stage of smoking acquisition.

Table 48. Percentages of adolescents' perception of their friends' attitudes towards their smoking at phase one and two by the change in their smoking behaviour during the academic year

Perceived friends' attitude towards adolescents' smoking	Adolescents who changed their smoking behaviour during the academic year					
	Smoked Once (n=66)		Occasional Smokers (n=38)		Regular Smokers (n=28)	
	Phase One	Phase Two	Phase One	Phase Two	Phase One	Phase Two
Negative	61%	59%	60%	38%	25%	25%
Neutral	36%	38%	42%	32%	71%	46%
Positive	9%	3%	3%	30%	4%	29%

It should be noted also that in the majority of cases, as shown in the words of the interviewed young people who changed their smoking behaviour, there is no direct peer pressure to experiment with cigarettes or to take up the habit of smoking. This becomes even clearer when we look at the qualitative analysis of the respondents' interviews, where they describe the kind of influence that is exerted on them.

3.10.5. Teachers

There is also no statistically significant association between the change of smoking status and the perceived attitude of the teachers towards the adolescent's smoking at phase two ($\chi^2=3.57$, $df=4$, $p>.05$). The opinion that the teachers foster about the smoking behaviour of the pupils does not play an important role in the decision of the adolescents to experiment with cigarettes or to become occasional/regular smokers – at least none that they perceive.

3.10.6. Social acceptability

It could be hypothesised that if adolescents consider smoking to be a socially acceptable behaviour, then it would be easier for them to change their smoking

behaviour and try a cigarette or increase the number of cigarettes that they smoke. This is not supported by the analysis of the data, since no statistically significant association is detected between the change of the smoking status and whether smoking is considered to be socially acceptable or not ($\chi^2=1.66$, $df=2$, $p>.05$) at phase two. This may also be due to the fact that almost all the respondents who changed their smoking behaviour during the academic year believe that smoking is socially acceptable at phase two, a belief that may have been shaped after their decision to start smoking or in increasing the number of cigarettes that they smoke. It should be mentioned that perceptions of social acceptability were not measured at phase one.

3.10.7. Smoking on the school premises

A statistically significant association is found between the change of smoking status at phase two and the attitude towards teachers smoking on the school premises at phase one ($\chi^2=23.40$, $df=4$, $p<.001$). The pupils who become occasional or regular smokers tend to believe that their teachers should be allowed to smoke on the school premises. They believe that the same should apply to the pupils, since a statistically significant association is found between the change in smoking status and the attitude towards pupils smoking on the school premises. This indicates that a positive attitude towards smoking on the school premises by teachers and pupils pre-dates the taking up of smoking. It is shown in the qualitative data that the pupils who support that smoking should be allowed on the school premises believe in the right that smokers have to express themselves freely, since they live in a democratic society. This could be

associated with the view that smoking is socially acceptable, the opinion held by most interviewed adolescents who changed their smoking behaviour accept.

3.10.8. Knowledge

The knowledge of the facts about smoking at phase one does not seem to influence the changes in the smoking behaviour of the pupils at phase two, since there is no statistically significant association between them ($\chi^2=17.51$, $df=12$, $p>.05$). It is found that there is a statistically significant association between the change of the smoking status and the sources of information at phase two ($\chi^2=17.74$, $df=8$, $p<.001$). The regular smokers tend to get information mainly from the Mass Media and their school and less from their parents. This confirms the hypothesis that the smoking adolescents have a different relationship to their parents than that of the non-smokers. It is shown in the qualitative data that many non-smokers explain their decision not to smoke by citing discussions that they have with their parents on the consequences of smoking on health.

3.10.9. Intentions

The intention that some pupils express to smoke in the future is considered by many researchers to be an important predictor of smoking in the future. Most pupils in the first part of the study state that they do not intend to start smoking by the end of the academic year, though a minority state that they are not sure or that they intend to smoke. The second part of the study offers the opportunity to test the claims that the pupils made in the beginning of the academic year regarding whether they will be smoking by the end of it or not, by looking at the adolescents who changed their smoking behaviour. There is a statistically

significant association between the adolescents' changes of smoking status at phase two and their intention at phase one to be smoking by the end of the academic year ($\chi^2=38.32$, $df=4$, $p<.001$) (Table 49). Most of those who have become regular smokers between phase one and two said at phase one that they would smoke by the end of the academic year.

Table 49. Percentages of adolescents' changed smoking behaviour at phase two by their intention to smoke by the end of the academic year at phase one

Changed Smoking Behaviour	Intention to smoke by the end of the academic year		
	yes (N=16)	no (N=88)	not sure (N=28)
Experimented with smoking	7%	62%	42%
Became occasional smokers	20%	30%	19%
Became regular smokers	73%	8%	39%

There is also a statistically significant association between the changes of smoking status and the intention to smoke in the future at phase two ($\chi^2=18.91$, $df=4$, $p<.005$) (Table 50). Most occasional and regular smokers believe that they will keep smoking later on in life. This finding confirms the assumptions made by other researchers that the intention to smoke in the future is a good and reliable predictor of adolescent smoking. It should be noted, though, that those who experimented with cigarettes tend to say either that they will not smoke in the future or that they are not sure what they will do. This is suggestive of the fact that experimentation with smoking does not necessarily lead to the taking up of smoking and provides support for the theory of stages.

Table 50. Percentages of adolescents' changed smoking behaviour at phase two by their future smoking intention at phase two

Changed Smoking Behaviour	Intention to smoke by the end of the academic year		
	yes (N=16)	no (N=88)	not sure (N=28)
Experimented with smoking	29%	77%	57%
Became occasional smokers	35%	10%	28%
Became regular smokers	36%	13%	15%

At this point it would be useful to present some of the indications of changes of smoking behaviour over time and the reasons that the interviewed adolescents who changed their smoking behaviour (n=65) provided to account for them.

3.10.10. From not smoking to experimenting with cigarettes

There are some pupils who did not smoke at the beginning of the academic year, but by the end they had experimented with cigarettes and taken up the smoking habit. A 15-year-old boy who became an occasional smoker says that: "he started smoking cigarettes because he was influenced psychologically by his teachers. They threatened him that he would not be promoted". A 15-year-old girl who smokes occasionally says that: "I felt stressed and anxious about the exams and I started to ask for cigarettes in order to relax. Of course I am not addicted to it". A 12-year-old boy who smokes occasionally says that: "I started smoking as well at some point". A 15-year-old boy says that: "I was very upset for a particular reason and while I was sitting with a friend of mine we decided to try it. We also felt very curious".

There are also other pupils who experimented with cigarettes and decided never to smoke again. A 15-year-old girl who experimented with cigarettes says that: "I tried smoking for the first time this year. I have smoked only 2 cigarettes in my

entire life. I felt that I was addicted to cigarettes for a week, but when I talked to my friends about it, they reacted very badly and told me to give it up and I did". A 15-year-old girl says that: "my friends pressured me to smoke, so I tried one cigarette". A 15-year-old girl says that: "I started smoking with other children, but when I realised that they were smoking more and more my attitude changed and I decided to quit smoking. Now I am trying and I am sure that I will make it". A 15-year-old boy says that: "I thought that smoking was something special. But I tried smoking once and I realised that it was stupid and now I am 100% sure that I will not start smoking". Another 15-year-old boy says that: "although I tried smoking once, the music that I listen to made me object to the use of cigarettes and drugs". A 15-year-old boy says that: "I did try to smoke, out of curiosity, but now I believe that smoking is stupid". A 12-year-old boy says that: "I thought smoking was good until I tried it. I didn't like it and moreover I was afraid of my parents' reactions".

3.10.11. Increase of smoking prevalence

There are some pupils who have experimented with smoking or were occasional smokers and increased the numbers of cigarettes that they smoke. A 15-year-old girl says that: "I started enjoying smoking more and I became a regular smoker". A 15-year-old girl who smokes regularly says that: "I decided to start smoking more because I feel very stressed". A 15-year-old girl who smokes regularly says that: "I started smoking more because I saw all the other students smoking and I felt jealous". Another 15-year-old girl says that: "I smoke regularly now. But this was a personal choice and nothing influenced my decision". A 15-year-old girl

says that: “I smoke more because I am afraid that my teachers will keep me down in the same class”.

3.10.12. Decrease of smoking prevalence

Some pupils who are occasional or regular smokers decide to cut down on the cigarettes that they smoke or to quit smoking all together. A 15-year-old boy who smoked occasionally says that: “I quit smoking because I saw pictures of smokers who suffered from cancer or heart problems on TV”. A 15-year-old boy says that: “I used to smoke 3 to 4 cigarettes a week, but when I realised that my stamina had decreased I quit smoking”. A 15-year-old girl who smokes occasionally says that: “students are not allowed to smoke in a designated area. So they have to smoke elsewhere and this is extremely dangerous. Therefore, I have now been forced to smoke less”. A 15-year-old boy who smoked occasionally says that: “I quit smoking because I realised that it’s bad for me. That is, I cut down on it”. A 15-year-old boy who smokes occasionally says that: “I have some health problems that are exacerbated by smoking, which is why I decided to reduce smoking”. A 15-year-old boy who smokes occasionally says that: “some people talked to me and I decided to reduce the number of cigarettes that I smoke, since it is not good for me”. A 15-year-old girl says that: “I used to smoke a couple of cigarettes, but now I don’t smoke at all”. A 15-year-old boy says that: “after my limited personal experience, I realised that smoking is disgusting and I haven’t smoked since 23/3/99”. Another 15-year-old boy says that: “I smoked for the first time 2-3 years ago and the number of times since then showed me that I personally don’t like smoking and that it doesn’t offer me anything. So, most probably, I will never smoke again”. A 15-year-old boy who

smoked occasionally says that: “I realised that smoking is stupid, which is why I gave it up”. Finally, a 15-year-old boy who smoked occasionally says that: “I could not run anymore, so I cut down on it”.

It is of great interest to identify the cause of the decrease of the number of cigarettes smoked by some occasional smokers and explore it further in order to use it in an anti-smoking intervention programme. The same interest also lies in the case of the pupils who tried a cigarette or more and decided that they do not want to keep up the smoking habit. According to the data, the main reasons for decreasing the numbers of cigarettes that adolescents smoke and for giving up smoking are a dislike for cigarettes, the realisation that cigarettes have nothing to offer, the harm on health and the negative reaction of the adolescents’ friends. There is also some evidence that there are a number of pupils, who actually enjoy the taste and feel of smoking and believe that they can get something positive out of smoking.

4. DISCUSSION

The aim of this chapter is to bring together all the information presented in the previous chapters in an attempt to provide some possible explanations for the research hypotheses stated and the findings of the analyses. It is, thus, of interest to explore the influence that both personal and social factors have on adolescent smoking and to identify some suggestions for an effective prevention/intervention anti-smoking programme. In order to achieve a more coherent presentation, each of the factors that influences adolescent smoking will be dealt with separately.

4.1. Age

Age seems to remain a critical determinant of adolescent smoking. Most young pupils are non-smokers, while older pupils are more likely to experiment with smoking and / or to take up smoking occasionally or regularly. Kokkevi's (1985) findings are similar. She found that there is a significant difference in the smoking prevalence of pupils, since older pupils (17-18 years old) smoke regularly five times more than younger pupils (13-14 years old). The age difference documented in this study is slightly smaller, since the age of the older pupils is younger (15-16 years old). This finding is accounted for by the theory of stages (Stern et al., 1987), which claims that children experiment with cigarettes around the age of 13 to 14. McKennel (1970) reports that smoking is established by the age of 14 or 15 and that little experimentation occurs thereafter. There is evidence, though, that in Greece there are quite a few

adolescents aged 15-16, who do experiment with smoking. It is also noteworthy that despite the fact that smoking in Greece is socially acceptable and allowed almost everywhere, children do not move on to the initiation-experimentation stage at an earlier age. This may be due to the fact that smoking is a complex procedure that involves the interaction of many internal and external processes. The children must reach an age when they are able to make up their own mind and make a decision whether to experiment with cigarettes or not.

The percentage of 12-13 year olds who have experimented with smoking and smoke occasionally or regularly (8.7%) – at phase one - is significantly less than reported by Davou in a study she conducted in 1992 using adolescents of the same age group. Davou states that 12.2% of her sample (1,500 adolescents aged 12-13 years old) experiment with smoking once or more and 6.4% are regular smokers. However, the proportion of adolescents who have experimented with cigarettes and are occasional or regular smokers (20.2%) seven months later (phase two) is greater than the percentage presented in Davou's study in 1992 (18.6%).

This increasing tendency in the smoking prevalence among 12-13 year olds is not very reassuring if the aim of the society is to decrease the levels of smoking, especially among younger people. It also shows how crucial it is to implement a prevention/intervention programme right at the beginning of the academic year in an attempt to 'catch up' with the mechanisms that lead to the uptake of the smoking habit. This increase in smoking prevalence between the beginning and the end of the academic year must be related to the age increase of the sample.

All the participants are 7 months older at the second phase and this difference in their age is also reflected in their smoking behaviour. As far as the comparison with Davou's results (1992) is concerned, it should be noted that Davou does not specify how she defines a regular smoker (the participants have a choice from the following statements: I smoke once a day, but less than a cigarette per day – I usually smoke one to six cigarettes per week – I smoke more than six cigarettes per week). So, the discrepancy between the smoking prevalence of this study and Davou's study may be due to some extent to a different classification system. But, even if this is the case, the discrepancy concerns only the proportion of smokers who are classified as regular.

The increase in the smoking prevalence between phase one (29%) and phase two (37.7%), which reflects the increase in the mean age of the participants, is evident among 15-16-year-olds as well. These percentages are higher than the one reported by Kafatos et al. in 1981 in a similar age group (18%). The study by Kafatos is dated almost twenty years previously to the present one, so there is likely to be an increase in the smoking prevalence, especially since smoking is regarded as socially acceptable and more Greek adults have taken up the smoking habit since. An additional factor that may have led to this increase in the smoking prevalence among 15-16 year-olds is the increase in the advertising of tobacco products in the press.

When looking closely at the changes in the percentages of smoking prevalence over time, it is evident that time is a luxury that most prevention/intervention programmes cannot afford. There is a substantial increase in the smoking

prevalence of both age groups just within 7 months, which renders every day valuable. This notion is also supported by Fergusson et al. (1995), who found that during the interval from ages 10 to 12 years, less than 10% of the non-smokers at 10 become smokers at 12. Whereas, during the interval from ages 14 to 16 years, over a third of non-smokers at age 14 become smokers at age 16 years. They support that there are similar trends for the transition from occasional smoking to regular smoking which accelerate with age. So, the implementation of an effective prevention/intervention programme as early as possible is imperative.

4.2. Gender

This study does not find gender to be a significant factor in terms of the prevalence of adolescent smoking. The amount of boys and girls who smoke is the same, although there is a slight tendency for boys to experiment with cigarettes more than girls. These findings do not coincide with those presented by Bolling (1993) and Diamond and Goddard (1994), according to which girls have not only caught up with boys in their rates of smoking, but they also smoke heavier and earlier. This is probably due to differences in cultural factors, since the above mentioned studies were carried out in the U.K. The 1982 World Health Organisation's report of smoking in 23 countries (the majority being developed ones) showed that in over half there is a dramatic, relative increase in smoking prevalence rates for girls.

The reason for this discrepancy may be that this tendency for girls to smoke more than boys is no longer apparent. Also it could be due to the values that are embedded in Greek society. In Greece, boys are given more freedom than girls and this could account for the fact that they experiment with cigarettes more and at an earlier age than girls. Moreover, more adult Greek men (46%) than women (29%) smoke, which may be a reflection of the society's tendency to consider smoking to be more appropriate for men. It should also be mentioned that it is mostly boys who reveal to their parents that they are smokers and the ones who perceive their parents as having a more positive reaction to their smoking.

The gender of the adolescent is a factor that must be taken into consideration when designing and implementing prevention/intervention programmes. It is wrong to assume that they respond to these approaches in the same way and that they are influenced by the same arguments. This will be further explored in the section on the suggestions for smoking prevention/intervention programmes.

4.3. Parents

The issue of the influence of parental smoking on adolescent smoking is interesting, since parents are the child's first model. According to Bandura's theory (1977), it seems that smoking parents are likely to have smoking children and non-smoking parents are likely to have non-smoking children. Goddard's survey (1990) supports the theory, finding that children with smoking parents are twice as likely to smoke than children with non-smoking parents. Skinner et al. (1985) suggest that parents may increase the likelihood that their children will

smoke despite what they say. So, the parents who smoke and tell their children that they should never smoke because 'smoking is bad and hard to quit' are not very convincing. However, the findings of this study show that the majority of parents do not act as behavioural models, in the sense that Bandura (1977) argues.

There are many non-smoking children who have smoking parents and quite a few smoking children who come from non-smoking parents. The relationship between parent's smoking and their children's smoking is not statistically significant. Flay et al. (1995), Friedman et al. (1985) and Stanton et al. (1992) support this finding. Smoking parents may constitute a live example of the negative consequences that smoking can have on health, while adolescents are able to make up their own decisions based on a variety of information that they are exposed to. It should be noted though, that there are some adolescents, who are influenced by the smoking behaviour of their parents. Therefore, the issue of parental smoking must not be taken lightly or dismissed as a factor that influences adolescent smoking, just because a statistically significant relationship is not established. Especially in Greece, there are many parents who send their children to buy them cigarettes and smoke in front of their children all the time.

The parents are usually perceived as having a negative attitude towards their children's smoking – irrespective of their own smoking behaviour – but this does not seem to have an impact on the smoking behaviour of their children. Although 97.5% of the children perceive their parents as having a negative attitude towards their smoking, quite a few experiment with cigarettes or take up smoking. This

finding coincides with those presented by Bolling (1993) and Aitken (1980) and does not support the theory of 'reasoned action' put forward by Ajzen and Fishbein (1980). Evidence from the longitudinal data supports the finding that the influence of parental smoking behaviour or perceived parental attitude towards their children's smoking is not statistically significant. That is, the young people who experimented with cigarettes or increased the amount of cigarettes that they smoked during the academic year do not appear to be influenced by their parents.

The analysis of the data reveals that younger non-smoking pupils believe that their parents will be strict with them. They think that they will cut their allowance, not let them go out with their friends and talk them into not smoking. Older smoking pupils, on the other hand, perceive their parents as being more passive or accepting of their children's smoking. This may be due to the fact that parents are more lenient with older children than with younger ones. More Greek parents are likely to accept the fact that their child smokes if he/she attends lyceum than if he/she attends gymnasium. Despite the fact that there is no literature to support this tendency, it is mirrored in the words of the interviewed teachers. Many teachers (40%) claim that pupils who attend lyceum should be allowed to smoke on the school premises, since they are old enough to make their own decisions. And many of these teachers are parents themselves. So, it can be argued that it is a cultural tendency that is reflected in the notions that adults have on adolescent smoking. Moreover, the children who have experimented with smoking may have found out that their parents' reaction to this initiation is not as bad as they thought it would be. So, it could be that

although some parents threaten their children with punishment if they catch them smoking, they are not as decisive when the moment comes and this may lead to further experimentation with cigarettes and the uptake of the smoking habit.

There are also some parents who decide to take a more active role in the formation of their children's smoking behaviour. According to this study, one third of the participants name their parents as their main source of information on the facts about smoking. The parents talk about cigarettes and the harm that they can cause to health and they even discuss with their children how to turn down the offer to smoke. Some of them go as far as offering the first cigarette to their children in an attempt to show them that smoking cigarettes is not that important. Then they take the opportunity to discuss this experience with their children and guide them. It should be mentioned at this time that some children claim that the reason why they turn down the offer to smoke is because they remember the words of their parents and because they have learnt to support their own will. Sun, Anderson, Shan and Julliard (1998) administered an anonymous questionnaire to 100 pupils aged between 10 and 14 years old (mean = 12.9), asking them to name who provided information effects on health of smoking. They report that 53% of pupils reveal that their parents taught them not to smoke. It is, thus, logical to assume that this approach is effective.

Although the smoking behaviour of parents and their perceived attitudes towards their children's smoking may not be that influential, they have the 'power' to help and support their children in making up their own mind about whether they want to smoke or not. Parents who are actively involved in the upbringing and

education of their children have the opportunity to approach their children and make a difference in their life.

4.4. Siblings

The influence that siblings have on adolescent smoking seems to be significant according to this study and the studies conducted by Ingresoll (1989), Lader et al. (1990) and Goddard (1990). Adolescents who smoke (57.5%) are more likely to have smoking siblings than non-smoking adolescents (42.7%). It is very interesting that the distribution of the smoking behaviour of the adolescents with non-smoking siblings is similar to that of adolescents with no siblings. This means that adolescents with non-smoking siblings smoke just as much as the adolescents who have no siblings, while adolescents with smoking siblings smoke more. This is an indication that having a smoking sibling puts the adolescent at risk and this is an argument that can be used to counteract other background factors that siblings may have in common. So, although siblings are exposed to a common background and availability of cigarettes in the family environment, the presence of a smoking sibling is very influential.

It should be mentioned, though, that the siblings do not offer cigarettes to the adolescents and they are not present in the instances that cigarettes are offered to them. It is true that the 'offer' of cigarettes is not necessarily a good measure of 'modelling', but it shows at least that siblings are not actively involved in the experimentation with cigarettes, although they may constitute a source of influence. So, it is possible that the presence of smoking siblings provides the

'alibi' that some children need, since they do not feel that they are alone in a potential argument and that smoking siblings do not act as 'pure' behavioural models. This notion is also supported by evidence from the young people who changed their smoking behaviour during the academic year and do not seem to be significantly influenced by the presence of their smoking siblings. It is likely to assume that a behaviour that is shared by more than one member of a family becomes partly a norm that can be supported and followed. A possible explanation why siblings are not present in the experimentation with cigarettes is that most siblings have different friends and they do not go out together. Since they cannot smoke at home, they have to do so when they are out with their friends, which they do not have in common. This finding is consistent with that of Friedman et al. (1985) who claim that most adolescents experiment with cigarettes in a social situation. Even if the presence of smoking siblings in the family influences the transition from non-smoking to experimenting with cigarettes, it does not seem to contribute to the taking up of the smoking habit.

4.5. Friends

Adolescence is a period characterised by the tendency that adolescents show to associate with their peers. They form groups and adopt a certain lifestyle, which gives them a sense of their own 'new' identity. Therefore, many researchers argue that the adolescents are now influenced by their friends and not by their parents. More specifically, Lau et al. (1990) support that adolescents are influenced in their health behaviour mainly by their friends and not so much by their parents. There is, though, the need to remember that the adolescents are not

passive recipients of the changes in their environment and social grouping. Sometimes they take an active part in the formation of the groups' rules and norms. This is also shown by the findings of the study conducted by Stanton et al (1996). A quarter of the adolescents who participated in this study actively promote non-smoking by talking to their friends and family and telling them not to smoke. There are also some adolescents (3%) who actively promote smoking through forcing or encouraging their friends to smoke. It must be noted that the adolescents are the ones who choose which role they will take (active or passive). This must be taken into consideration when trying to explore the role of the friends in the formation of the adolescents' smoking behaviour.

The smoking behaviour of friends seems to constitute a very influential factor as far as adolescent smoking is concerned. Smoking adolescents have a lot of friends who smoke (95%) and non-smoking adolescents have non-smoking friends (95%). Krohn et al. (1983), Flay et al. (1994) and Biglan et al. (1995) cite similar findings. This could mean that there is an influence for and against smoking, respectively. So the presence of friends can act as a motive to smoke or as a protective factor against smoking. It seems probable that the adolescents choose their friends according to their need to justify and protect their choice to smoke or not. Friends change over time as do the smoking habits of adolescents. The findings from the adolescents who changed their smoking behaviour during the academic year show that friends are influential in the formation of young people's smoking habits. The young people who experiment with smoking or increase the numbers of cigarettes that they smoke tend to have smoking friends. This notion is also supported by the fact that younger adolescents have mainly

non-smoking friends (98%), while many older adolescents (35%) have a significant number of smoking friends. Taking into account the limitations posed by the cross-sectional nature of the data, it can be argued that many of the older adolescents who have smoking friends now, used to have non-smoking friends. So, either their friends changed their smoking behaviour or they chose new friends on the basis of their smoking behaviour. This is part of the evolution of friendships and not a sign of 'peer pressure'.

One of the ways we try to explain adolescent risk taking is through the mechanism of 'peer pressure'. Adolescents are 'pressured' by their friends to smoke. There is little evidence in this study that there is actual pressure to smoke. Only a few adolescents claim that their friends actually pressure or force them to smoke, by calling them names, making them feel unwelcome or threatening to expel them from the group. On the contrary, there is evidence that some non-smoking groups threaten members who experiment with smoking that they will have to leave if they do not give up smoking. The suggestion that non-smokers form groups with other non-smokers in an effort to protect their non-smoking status is also supported by Ennett et al. (1994).

It is true that friends are usually present when the adolescent is given the chance to experiment with smoking. This is natural, since the only time that the adolescent can be offered a cigarette is when he/she is not at home. So this 'time' is when the adolescent is either on the school premises or out with his/her friends. But 'presence' must not be confused with 'pressure'. The adolescent can always decide whether he/she will accept or turn down the offer to smoke. This

decision is usually influenced by personal and situational factors that will be discussed later on. This is also the case for smoking on the school premises. Some adolescents advocate that the presence of smoking adolescents on the school premises sets a bad example for younger adolescents. This does not mean that smoking adolescents will 'pressure' the non-smoking ones to take up the smoking habit. They will set an example. It is up to the others to decide whether they will follow it or not. This is not to say that smoking should be allowed on the school premises. It is just a reminder of the fact that it is usually down to the adolescent to make up his/her mind.

There are some adolescents who say that they will take up smoking in the future if their friends smoke, but this is not necessarily an indication of 'peer pressure' either. It may express the need that the adolescent has to imitate his/her friends and explore new things, given a more 'positive' environment to do so (when the friends smoke themselves). It could be called 'peer influence'. It is equally evident among adolescents of both age groups. Younger adolescents are at the peak age for 'peer influence', since they seem to be very eager to conform in front of their peers (Lau et al., 1990). Older adolescents may be influenced by their peers and friends because they have not yet been able to form their own identity or because they feel insecure, stressed and lonely. The distinction between 'peer pressure' and 'peer influence' is very important in terms of intervention. It suggests that teaching adolescents to "just say no" is irrelevant, as the influence doesn't come in this straight forward pressure. Rather, discussing the fact that many young people do not smoke may be more effective. It addresses the misconception that most adolescents foster that smoking is

commonplace and conformity, to the majority, means not to smoke (Falco, 1992).

There is more evidence to support the suggestion that adolescents choose to form a group on the basis of their common habits and in an effort to maintain them. Younger adolescents (who have a lot of non-smoking friends) believe that if they smoke their friends will avoid hanging out with them and advise them not to smoke. Older adolescents (who have many smoking friends) think that their friends will not interfere or will offer them a cigarette and join them. Non-smoking adolescents believe that if they start smoking their friends will avoid hanging out with them and will advise them not to smoke. Smoking adolescents, on the other hand, believe that their friends will offer them a cigarette and join them. The adolescents seem to perceive that their friends will react in a way that justifies and safeguards their present smoking behaviour. This suggestion is also supported by the fact that the adolescents who have experimented with cigarettes believe that their friends will not interfere with their decision. So, they will be left to make up their own mind (no 'pressure') and possibly remain with the group that they belong to or choose another one with similar habits to their own.

It is important at this point to take advantage of the benefits of the longitudinal nature of the data, which is quite enlightening. It is found that a change in the perceived attitude of the friends may precede the actual change in the smoking behaviour of the young people. This is indicated by the fact that the young people who decided to smoke more perceived their friends as having a more neutral or positive attitude towards their smoking after they changed their

smoking behaviour. This might be done in an effort to safeguard their decision to increase the amount of cigarettes that they smoke. It should also be mentioned that the young people who decide to take up the smoking habit may feel the need to have some support for this decision. Since they know that it is difficult to change the attitudes of their parents or teachers, they may choose to perceive their friends as being neutral, positive or at least less negative. This will provide them with the 'encouragement' that they need and help them partly justify their decision.

Another finding of this study, which is indicative of the Greek mentality, is that girls perceive their friends as having a more negative attitude towards their smoking than boys do. Girls are not supposed to be 'tough' and experiment with things the way boys are. So, it is much easier to criticise a girl who smokes than a boy. This may partly account for the fact that more boys than girls experiment with smoking and that there is no difference in the smoking prevalence between boys and girls, despite international trends towards higher rates in girls.

4.6. Teachers

The role of teachers as behavioural models is not sufficiently explored in the literature. Teachers are the only adults, besides the caregiver, who spend a substantial amount of time with the adolescent every day, and may influence his/her behaviour. In Greece, teachers are allowed to smoke on the school premises and they often smoke in front of the pupils. This is why it is of importance to see whether the teachers can act as behavioural models or not.

The young people who changed their smoking behaviour during the academic year do not appear to be influenced by the smoking behaviour or perceived attitude of their teachers towards their smoking. The young non-smoking pupils tend to believe that their teachers act as behavioural models because they are responsible adults and their actions are worth imitating. Older smoking pupils believe that teachers do not act as behavioural models. They advocate that if the pupils want to smoke they will do so irrespective of their teachers' smoking behaviour. This difference in opinions may be due to the fact that young pupils are more idealistic and categorical in their ideas and judgements and are in need of models to inspire their actions. Older pupils have formed a sense of identity in which they have embedded their own values, which they use to make their decisions. It is also possible that they talk from actual experience.

Young non-smoking pupils believe that if their teachers see them smoking they will tell them not to smoke, expel them from school or notify their parents. Older smoking pupils, on the other hand, believe that their teachers will tell them to smoke in a specific area or do nothing. It can be argued that the perceived attitudes of their teachers are influenced to some extent by their own personal experience. Non-smoking pupils are afraid of what may happen to them if they are caught smoking, while smoking pupils who have not experienced any negative reactions have a more positive perspective. This will be clarified when each school has been examined separately. A fact that supports the theory that older smoking pupils talk from their own personal experience is that there are certain areas in most lyceums where pupils are allowed to go 'unofficially' in order to smoke. Also many interviewed lyceum teachers claim that the pupils

who attend lyceum are mature enough to decide whether they want to smoke or not, while they do not hold the same opinion for pupils who attend gymnasium. This evidence derives from the opinion the teachers express on whether pupils should be allowed to smoke on the school premises or not and is also substantiated by the words of the young people who participate in the study and claim that lyceum pupils smoke more freely on the school premises.

4.7. School

The school environment is very important in the formation of the adolescent's identity and decisions, since it is the 'context' where he/she spends most of his/her time. Therefore, it is essential to examine the potential influence of the school environment on the adolescent/pupil. The role of the school is to offer knowledge to the pupils and to teach them how to live by certain rules, since school is a 'small version of the society'.

There is no Health Education in Greek schools and this makes the work of the teachers more difficult, since they do not have a curriculum that they can follow in order to inform pupils about diverse health and safety issues, including cigarette smoking. They have to improvise and talk about these issues using their own knowledge – which is often limited - when and where they are given the opportunity. This is probably why the pupils name their school as the last source of information on the facts about smoking. Only one of the schools claims that there is an anti-smoking campaign at the school and that the pupils are punished when they are caught smoking on the school premises. They are expelled from

school and their parents are notified. The other schools have a policy that does not allow pupils to smoke on the school premises, but there is not really any clear indication of how smoking pupils should be handled as admitted by the head-teachers. It is up to the teachers and up to the situation to decide what will happen to the pupils who smoke.

It is noteworthy that in the school where the anti-smoking campaign takes place and the smoking policy is strict, there seems to be no difference in the smoking prevalence of the pupils. There are a few pupils, mainly girls, who refer to the effort of the biology teacher to talk to them about cigarette smoking during biology class, but this does not seem to have an impact on their smoking behaviour. They have not increased their knowledge during the academic year, they receive all the information from their parents and friends and they are not sure whether they will take up smoking in the future or not. This probably means that the school's notion of an anti-smoking campaign is very limited and the effort is not well organised. It may also show that punishing pupils without giving them an alternative and discussing the issue with them is not an effective anti-smoking measure.

In the schools where no formal antismoking campaign takes place, pupils tend to show a positive attitude towards teachers' and pupils' smoking on the school premises, they are less well informed about the facts of smoking and they state that they may take up smoking in the future. This indicates that a positive attitude towards smoking, which may be created by the fact that smoking is allowed on the school premises, makes pupils more prone to the idea of experimenting with

cigarettes and taking up the smoking habit as well. If this is true, then this is why smoking on the school premises constitutes a danger to the pupils' welfare. It exposes them to a situation that renders smoking acceptable and the idea of becoming a smoker does not seem to be against the norms. This is confirmed by the fact that the majority of pupils claim that smoking is socially acceptable.

Smoking is allowed almost everywhere and people cannot tell someone not to smoke in a public place, even if they are disturbed by the smoke. People smoke in universities, public services, open cinemas and even in the hospitals. Redmond (1999) examined trends in the daily smoking of U.S. high school students, along with smoking attitudes and beliefs. The sample consists of a nationally representative sample of 15,000-18,000 students per year, drawn from surveys of high school seniors from 1978 through 1995. The proportion of students who had never smoked on a daily basis declined from the late 1970s through to the early 1990s but has increased annually since 1992. Still, the proportion trying cigarettes increased, as did the proportion of smokers who start smoking more frequently. He concludes that the overall upswing in daily smoking is connected with the greater social acceptance of smoking. If this factor is of significance in the U.S., where smoking is banned in all the public places, it must be much more influential in Greece where smoking is socially acceptable.

This is where the role of the school as a 'small version of the society' comes in. Pupils spend many years of their lives on the school premises and to achieve a successful co-existence they have to comply with certain rules. They learn about their own rights and obligations, as well as the rights, obligations and

responsibilities of their teachers and their school. School is a society that has to be well organised in order to function properly and effectively. During their interviews the pupils express their opinions regarding whether teachers and pupils should be allowed to smoke on the school premises or not. These opinions are indicative of the ideas that they have about the organisation of the school system. Many pupils, especially older ones who smoke, believe that pupils and teachers have equal rights and since they are all free individuals, they should both be free to smoke on the school premises.

Freedom and democracy are concepts that are inherent in the thought and the upbringing of the Greek pupils and so they use them to justify their decision and the decision of their teachers to smoke. These pupils will not change their mind just because smoking is banned on the school premises or because their teachers threaten to expel them from school if they catch them smoking. The idea of prohibition may actually reinforce their need to protect their rights. There are also some pupils who smoke, who claim that since their parents are aware of the fact that they smoke and they agree to it, they have the right to smoke on the school premises as well. They argue that the school cannot take on the role of their parents and tell them what to do and what not to do. What needs to be addressed is the issue of the right of smokers to smoke together alongside the right of non-smokers not to inhale their smoke. There are some pupils who acknowledge this 'conflict' of rights between smokers and non-smokers and suggest the creation of a designated area where the smokers can go and smoke, so that they do not have to do so in the toilets and other unhealthy places. Older pupils in particular are aware of teachers' smoking on the school premises and

perceive it as unjust and hypocritical that there should be one expectation for teachers and another for pupils. It is probably not viable to attempt to enforce smoking prohibition for older pupils whilst teachers smoke openly. There are some adolescents who are troubled by this 'conflict' and they do not know which should be satisfied – the rights or the obligations. Although there is the need to respect the opinions of the pupils, it is also essential to take into consideration that allowing smoking on the school premises gives a message in the 'small society' that this is acceptable. This is where the school should come in with a clear and concise policy regarding smoking on the school premises that will address these issues and set some rules. Public smoking bans create societies with a negative attitude to smoking, which in turn probably reduces smoking prevalence.

Issues such as respect for the health of others and for the school and discretion form part of the obligations that both pupils and teachers have. They have to respect the right that other people have not to smoke and the fact that school is not intended for smoking, as some of the pupils point out. There are also quite a few pupils who believe that their teachers must try not to smoke in front of the pupils, since they do constitute a behavioural model for some of them – especially the younger ones. Some suggestions regarding the planning of a prevention/intervention programme on the basis of these rights and obligations are made in the relevant section that follows.

It should be noted at this point that there is an interaction between friends and school. Direct action taken by schools does not seem to be very effective in some

ways – knowledge does not appear to change in this study nor is the smoking prevalence decreased. However, friends are influential and friends are made and located mostly on the school premises. School's role as the 'small society' influencing pupils through peers seems to be a more promising angle, worth identifying and exploring. This is consistent with Falco (1992) and with Bangert and Drowns (1988), who did a meta-analysis of drugs education programmes (which would include anti-smoking and drinking) and found that peer-led programmes were significantly more effective than the rest.

Finally, it is worth mentioning that the schools are not examined in an effort to establish differences in the smoking prevalence according to socio-demographic variables, since Davou (1992) argues that such differences do not exist in the Greek society as far as adolescent smoking is concerned.

4.8. Knowledge

The finding that 90% of the adolescents are very well informed on the facts about cigarette smoking and that they are aware of their knowledge is both reassuring and unsettling. The reassuring aspect is that many adolescents know the implications that cigarette smoking may have on their health. They are familiar with the concept of 'passive smoker' and they advocate their right not to become one. There are also quite a few adolescents who say that they do not intend to take up smoking in the future and have turned down the offer to do so, because they do not wish to suffer from all these potential diseases. Although the school does not seem to be able to provide all the necessary information there are other

sources, namely parents, friends and the Mass Media that can make up for this deficiency. Of course the issue is that the knowledge that the pupils derive from this sources of information cannot be controlled and it may be inaccurate or inadequate. So, the school must not rely on others to educate the adolescents on health issues.

The unsettling aspect is that if the adolescents are already aware of the health consequences cigarettes may have on their health and they continue to smoke, there is not much that can be done to change their mind. It is obvious that they do not experience cognitive dissonance and their decision to take up smoking is conscious. Before adopting this pessimistic admission, there are two important dimensions that must be taken into consideration.

The first dimension is why do pupils smoke? They smoke for a variety of reasons and they may feel that they gain things from cigarettes that make it worth risking their life thirty or forty years down the line, since they enjoy the benefits right now. So, these adolescents are not 'lost causes'. Maybe a more holistic approach to adolescent smoking is needed, whereby the emphasis is not merely on the health risks associated with smoking but also on the personal factors that lead to smoking. Also it could prove effective and beneficial for the students to be informed of the short-term consequences that smoking has on their health.

The second dimension is the depth and the quality of the knowledge. How much do adolescents really know? An interesting finding of this study is that adolescents are able to identify some statements regarding facts about smoking

as true or false, but they do not really know what they mean. For example, they may know that smoking can cause asthma or bronchitis, but they do not know what asthma and bronchitis are and their connection to smoking. This means that their knowledge is superficial and this may be a reason why they smoke. An effort to provide them with more complete and accurate knowledge may lead to a review of their decision to smoke or at least their decision to keep up the habit will be based on the true awareness of the potential consequences of their decision on their health. Inadequate knowledge may also account for the fact that the young pupils who changed their smoking behaviour during the academic year do not seem to be influenced by the information that they have on the facts about smoking. These misconceptions and half-truths that adolescents foster are discussed in the section on the suggestions for prevention/intervention programmes.

4.9. Individual or personal factors

Individual or personal factors that influence the adolescents' decision to take up the smoking habit are complex and subtle and are very often overlooked in preference of more 'powerful' notions and ideas such as 'parental modelling' or 'peer pressure'. Although these do exist and influence the adolescent to some extent, it is essential to remember that the adolescents usually base their decisions on a variety of personal needs and motives that are not necessarily subject to modelling or pressure. This belief is supported by the words of the adolescents who name a variety of personal reasons that lead them to the decision to take up smoking now / in the future or not.

Many adolescents claim that the decision to experiment with cigarettes or not is entirely their own. Some of them even go out and buy their own first pack of cigarettes in order to try one or they ask a friend to give them one. There are a variety of reasons why they do so. There are some adolescents who feel the need to grow up and they believe that they can achieve it through smoking. Smoking is a behaviour that is suitable for adults – especially in Greece where smoking is socially acceptable. They take on some of the adults' prestige and maturity when they are holding a cigarette in their hand and smoking. Actually quite a few lyceum pupils argue that they are mature enough to smoke, which may mean that smoking is linked to maturity and that maturity is attributed to the smoker. On the other hand, gymnasium pupils say that they are not mature enough to smoke, because they cannot realise the extent of the consequences that smoking may have on their health. They may smoke when they grow up and finish school and are adults. There are quite a few adolescents who plan to start smoking when they are older, because they say that they can smoke when they are adults and nobody can control them. All these statements and opinions suggest that there is a link between smoking and adulthood/ maturity, which may lead some adolescents to smoke, since they want to be or feel grown up. Adolescence is a transitory period between childhood and adulthood. The adolescents are treated both as children and as adults according to the situation. So, smoking may be for them a way to prove that they are not children but adults.

There are also many adolescents who say that they smoke because cigarettes make them relax. They are very stressed with their exams or with problems that they have which may even derive from their family environment. Cigarettes help

them overcome the stress that they feel and to cope with their problems. Lloyd et al (1998) support this suggestion. They advocate that smoking is an effective stress release factor since it directs attention away from the stressor to the activity of smoking. This may be one of the reasons why older adolescents smoke more than younger ones. The older participants of this study mention stress as a factor in why they take up smoking more than younger participants. They have more obligations at school and they have to make decisions about their future, which may cause conflict within them or with their environment. It should be pointed out that since the obligations that Greek pupils has increased – especially due to the last change in the examination system for pupils of all ages – this factor must be adequately and promptly addressed. So, it may be logical to assume that insecure and anxious adolescents may resort to cigarettes in an effort to control their stress and anxiety.

Curiosity is a personality trait that is characteristic of adolescence and may lead many adolescents to experiment with smoking. They want to experiment with new things and cigarettes are no exception to the rule. Everybody talks about cigarettes. Cigarettes are widely advertised in Greece and smoking is allowed almost everywhere. There are many statements associated with the ‘paraphernalia of smoking’. A large number of actors, athletes and celebrities smoke. Smoking is trendy and cool. Are these incentives attractive enough to provoke the curiosity of the adolescents? There are many adolescents who think that they are and they decide to experiment with smoking. Curiosity is a factor that leads to experimentation but is not usually responsible for the adolescents’

decision to take up smoking, since experimentation alone should satisfy curiosity. It takes more than curiosity to keep up smoking.

A cigarette can replace a friend. There are some adolescents who say that they smoke cigarettes to reduce their feelings of loneliness. They may light a cigarette late at night when they are up studying and everybody else in the house is asleep. A cigarette can be a friend who is always there when needed and does not offer any criticism or disappointment. This reason for smoking may be more prominent in the case of adolescents, who are not socially competent, do not have many friends and spend a lot of their time alone. They will appreciate the company that the cigarette has to offer them.

Many people have the tendency to downplay the importance of the things that cigarettes can offer to smokers (peace, security, company, maturity and satisfaction of curiosity). Some argue that adolescents reproduce some phrases that adults use to justify their smoking. Even if this is the case, they do believe that these effects are real and they experience them as such. So, it is important to listen and to focus on each one in order to be able to address them in a prevention/intervention programme and maybe to teach them other skills and activities that can have the same impact on them. It is equally significant to acknowledge that many of the smokers do not seem to suffer from 'cognitive dissonance' since they can justify their smoking when needed – at least to themselves. Lloyd et al. (1998) reach the same conclusions and state that even non-smokers feel that smoking has something to offer.

There are also some adolescents who claim that they smoke out of habit. They have associated smoking with some of their daily activities, like drinking coffee or coke, going out with their friends or having a good time. They do not claim that they are addicted to cigarettes, they just say that they are used to smoking when they do certain things. It is something like a ritual, which sometimes leads to a feeling of order and safety.

Other smoking adolescents, on the contrary, say that they are addicted to smoking and this is the only reason why they smoke. In the substance literature there is reference to the 'addictive personality'. This may be a term that can be associated with smokers as well, since according to many scientists nicotine can be highly addictive. But even if nicotine is not addictive, if they perceive themselves to be nicotine addicts they will act as such. They may actually experience withdrawal symptoms. Whether they are real or not, scientifically proven or not, they are experienced as such and as a result the adolescents cannot abstain from smoking. Besides, they have all heard stories from relatives or friends, who tried to quit several times but cannot because 'cigarette smoking is an addiction'. Davies (1992) argues that the belief that they have an addiction is more important than any actual physiological addiction. There are some adolescents who report that they are addicted and they may actually be physically addicted. He argues that the real problem is the belief in addiction, which makes them feel helpless – as is the case with other drugs. There are some participants who claim that they do not want to take up smoking in the future because they are afraid that they may lose control (become helpless) and become addicted to cigarettes.

Finally, some adolescents advocate that their decision to experiment with cigarettes and / or to take up smoking depends entirely on the situation. They happen to be in the right/wrong place the right/wrong time. Most adolescents are frequently offered cigarettes. They may generally turn down the offer and decide one day to experiment with smoking or not. Since it is impossible to follow adolescents everywhere they go and try to prevent them from experimenting with cigarettes, educators may have to accept that they can inform students of the facts about smoking, offer advice and support but ultimately the decision to smoke is a personal one.

4.10. The pupils who changed their smoking behaviour during the academic year

The finding that almost 1/5 of the sample altered their smoking behaviour during the academic year can be used to derive more information about the factors that influence this change. The evidence supports the theory of stages, since almost all the adolescents move from one stage to the next without making any major leaps. Therefore, this indicates that the road to becoming a regular smoker is quite long and requires the transition from experimentation to occasional and then to regular smoking. Therefore, timely intervention is required in order to prevent the adolescent from experimenting with smoking or to move from one stage to the next.

The need for this intervention is stressed by the fact that transitions to smoking behaviours show a clear tendency to accelerate with age. Fergusson and

Horwood (1995) examined the process of transition from non-smoking to regular weekly smoking during the period of 10 to 16 years; data was gathered during the course of a longitudinal study of 957 New Zealand adolescents. The data was analysed using a latent Markov model to estimate rates of transition between the stages of smoking. The parameter of the latent transition matrix suggest that once young people become occasional or regular smokers, it is unlikely that they will return to being non-smokers or decrease the numbers of cigarettes that they smoke. This implies that the individual transitions through various stages of smoking are, to a substantial extent, irreversible, so that once an individual has graduated to a given stage of smoking behaviour it is unlikely that they will return to an earlier stage of this process. There is also an indication that transitions to smoking behaviours show a clear tendency to accelerate with age. The theory of smoking stages is also supported by the finding that some adolescents who experiment with cigarettes and realise that it is not important or that they do not like the taste, decide not to take up smoking. This indicates that experimentation with smoking does not necessarily lead to cigarette smoking and renders the implementation of timely and effective programmes imperative.

Parental smoking behaviour and perceived attitudes towards their children's smoking do not appear to influence the adolescents' smoking behaviour and neither does the presence of smoking siblings in the family, or the perceived attitudes of the teachers towards their pupils' smoking. These findings support the hypotheses that are made in the relevant sections of this chapter about the nature of the influence those parents and teachers exert on adolescents. In the case of the siblings it seems to suggest that having a smoking sibling does not put

the adolescent at risk and that siblings do not contribute to the transition from one stage to the next.

The adolescents who increase the amount of cigarettes that they smoke have a lot of smoking friends and believe that these friends would approve of their smoking. This is indicative of the tendency people have to associate with others who share the same behaviours. Therefore, smoking adolescents may choose to befriend other adolescents who smoke as well and who approve of their smoking. The adolescents who experiment with cigarettes believe that their friends will not approve of their smoking, but still they decide to try a cigarette. This indicates that they do make their own choices in the end, regardless of the influence that their friends may have on them. It is also probable that adolescents who increase the amount of cigarettes that they smoke do so because they are part of a group that shares the same habit and does not exhibit a negative attitude towards their actions. This is not a sign of 'peer pressure', but of selection. They choose to be with other adolescents who are smokers themselves and thus not so judgmental of their smoking. Moreover, it must be noted that in almost all cases there is no sign or mention of direct peer pressure to experiment with cigarettes or to increase the amount of cigarettes that they smoke. There is, though, direct and indirect influence from their peers and friends to smoke, which must not be disregarded. It is an important factor that must be taken into consideration when planning an effective prevention/intervention programme. The extent to which each adolescent is influenced depends on individual and situational factors as well as on the influence that he/she receives from other sources.

Peter Lynch (1995) noted: “that there appears to be an implicit presumption that smokers are somewhat more ‘weak minded’ or below average than non-smokers. This is suggested by the disproportionate emphasis of environmental and social factors investigated to explain smoking as a behaviour. Health education practice has tended to follow this research and it has been found to be lacking. Adolescent smoking research has focused mainly on a behaviourist interpretation. It is assumed that there are specific environmental stimuli which young people respond to and that researchers have not yet found the key stimulus. This is strongly contrasted with a more educationally derived model – which involves the provision of information, advice and skill development but respects the right of individuals to choose their own health behaviour”. This is the point that the present study is trying to make – which is also supported by the findings – that the individuals always have the last word and can make up their own mind and decision.

The adolescents who changed their smoking behaviour during the academic year believe that smoking should be allowed on the school premises and they base this belief on the fact that both teachers and pupils have the right to act as they please. They are taught that all people have equal rights, so since teachers do smoke on the school premises so should the pupils. It seems that this tendency to ‘support’ the rights of the teachers as well as their own, is intended to safeguard the existing situation and try to keep it from changing. It is normal to project the rights that they think they have in order to gain the permission to smoke on the school premises. This attitude seems to represent their view towards smoking in general and is not limited only to the school premises. They make an informed

choice to experiment with smoking or to become occasional/regular smokers and so they need to express their view on smoking, which is positive, since smoking is an activity that they engage in.

The knowledge that adolescents have of the facts about smoking is not an important parameter in their decision to change their own smoking behaviour. This could indicate that their knowledge is superficial or useless, in the sense that it cannot compete with the pleasure that they derive out of smoking. Their main sources of information are the Mass Media and the school. The adolescents who smoke occasionally or regularly do not get much information from their parents, confirming the hypothesis that they are not as close to their parents as non-smokers are (Sun et al., 1998). It must also be remembered that the information they derive from the school is sporadic, circumstantial and not always accurate. Moreover, the image of the smoker that is projected in the Mass Media is often that of the attractive, powerful and successful individual, which can be very appealing to adolescents, especially insecure ones.

This confirms the suggestion that many adolescents experiment with smoking or take up smoking for reasons that are related to their personality. Some smoke out of curiosity, others to imitate their friends, to relax, to increase their self-esteem or to stop feeling lonely (Lloyd et al., 1998). Some adolescents try it while in the company of others, while other adolescents experiment on their own, as shown by the participants' description of cigarette experimentation conditions. When the cigarettes satisfy their needs they increase the amount of cigarettes that they smoke in an effort to sustain and reinforce their gains – which are mainly

psychological. Some of them say that they increase the amount of cigarettes that they smoke because they help them cope with their stress or because they keep them company. When they do not find what they are looking for in cigarettes or when they are afraid that they may lose control and become addicted they decide never to smoke again. This shows that it is up to the adolescent to make up his/her mind and it is never too late to do it. This is also supported by the fact that there are some adolescents who decrease the amount of cigarettes that they smoke for reasons that are related mainly to their health. This should be taken into consideration when planning a prevention/intervention programme.

Finally, it must be stressed that the adolescents who change their smoking behaviour during the academic year intended to do so since the beginning of the academic year or are not quite so sure about it. This confirms the findings of many other studies that the intention to smoke in the future is a good and reliable predictor of adolescent smoking. There is always a debate about whether the change in the attitude precedes or follows the change in behaviour. A further implication of the latter finding may be that there are some adolescents who foster an uncertain or positive attitude towards smoking before they actually take up smoking. So, it is possible that they acquire a positive attitude or reinforce the existing one over time in order to support and justify their decision to experiment with cigarettes. This can account for the fact that although at the beginning of the academic year they are non-smokers, they express the intention – certain or not – to smoke in the future and eventually do so. It is also plausible that during the course of events they ‘select’ to associate with people who will tolerate or support their possible change of behaviour.

Michell et al. (1996) cited evidence that supports the latter hypotheses. They found that 'intention to smoke' distinguishes between pupils who do not want to smoke and who therefore adopt strategies to avoid both friends who smoke and social contexts where they may be offered cigarettes, and pupils who have to some extent made up their minds to try smoking and who therefore seek out social contexts where smoking occurs. They hypothesise that pupils who are ready to smoke knowingly hang out with peers who will facilitate their entry into smoking behaviour. They are neither surprised nor upset by the offers of cigarettes that follow.

4.11. Evaluating the theories of adolescent smoking

All the prevalent theories in the area of adolescent smoking (social learning, reasoned action, cognitive dissonance and the theory of stages) are examined in this thesis enabling, thus, the exploration of their strengths and weaknesses. Each of these theories is evaluated separately.

4.11.1. social-learning theory

The social-learning theory is partly substantiated by the findings. Parents, siblings, friends and teachers seem to act as behavioural models - to some extent. Their impact on the adolescents' decisions differs according to the young people's age and smoking behaviour. The young people who are aged 12-13 are more prone to the influence of significant others than are young people aged 15-16, who are more critical in their thinking and the behaviours that they choose to

imitate. The non-smoking adolescents are influenced by the smoking behaviour of others to a greater degree than the ones who have experimented with cigarette smoking and are occasional or regular smokers. The theory cannot explain why young people who experiment with cigarettes decide never to smoke again or continue to smoke/increase the amount of cigarettes that they smoke.

It is also important to emphasise that exposure to the smoking behaviour of significant others may discourage young people from taking up smoking. There are some young people who claim that they do not intend to take up smoking in the future because they have witnessed the negative consequences that cigarette smoking can have on health. This does not mean of course, that children and young people should be exposed to role models who smoke hoping that they will perceive the negative consequences of cigarettes. The fact that there are some young people who are influenced by the smoking behaviour of significant others warrants the attention of the society.

4.11.2.theory of reasoned action

The theory of reasoned action has two components: the personal factor and the subjective norm. The personal factor, which reflects the attitude of the person towards the behaviour, seems to constitute an important predictor of smoking behaviour. There are many young people who say that they decide to experiment with smoking or take up smoking because they choose to do so. There are also some who perceive that smoking has some negative consequences on their health (change of attitude) and decrease the amount of cigarettes that they smoke and

try to quit. This concept can account for the decision to take up the smoking habit or not, but it does not provide any information on what this attitude is based on and how it is formed. Moreover, it cannot explain the difficulty experienced by the people who want to give up smoking to do so. They seem to have a negative attitude towards cigarette smoking for various reasons, but they cannot act on their decision to reduce or stop smoking.

The subjective norm refers to the tendency some people have to perform a behaviour when they evaluate it positively and when they believe that important others think they should perform it. Non-smoking young people usually perceive their family, friends and teachers as supporting their decision not to smoke and many smoking adolescents believe that their smoking friends approve of their smoking. There are, though, many smoking adolescents who believe that their parents, friends and teachers would or do disapprove of their decision to smoke, but they continue to do so. It seems that their personal attitude towards smoking is more important than the perceived attitude and reaction of significant others to their decision.

In a variety of situations, there seems to be a contradiction between the two components of reasoned action: the personal factor and the subjective norm. The personal attitude towards a certain behaviour may differ from the attitude that others foster about the same behaviour. The theory does not provide any information on what happens when this contradiction exists and how it is resolved. There is no indication of which is the stronger and more important predictor of behaviour: the personal factor or the subjective norm.

4.11.3.theory of cognitive dissonance

According to this theory, a person who has two cognitions that are inconsistent is likely to experience dissonance - a state of psychological discomfort or tension. As dissonance is experienced as a negative drive state, a person is motivated to reduce or eliminate it. So, smokers know that they should not smoke and they experience cognitive dissonance. One way of eliminating its importance is by downplaying the importance and the prevalence of the diseases that are caused by cigarette smoking. But most smokers seem to be very well informed of the facts about cigarette smoking and continue to smoke because they derive pleasure out of smoking. This immediate offer of pleasure may be more important to them than potential problems they may have to face years later. And many of them may not even experience any state of dissonance, since they are aware of the reasons why they smoke and do not have any intention of giving it up.

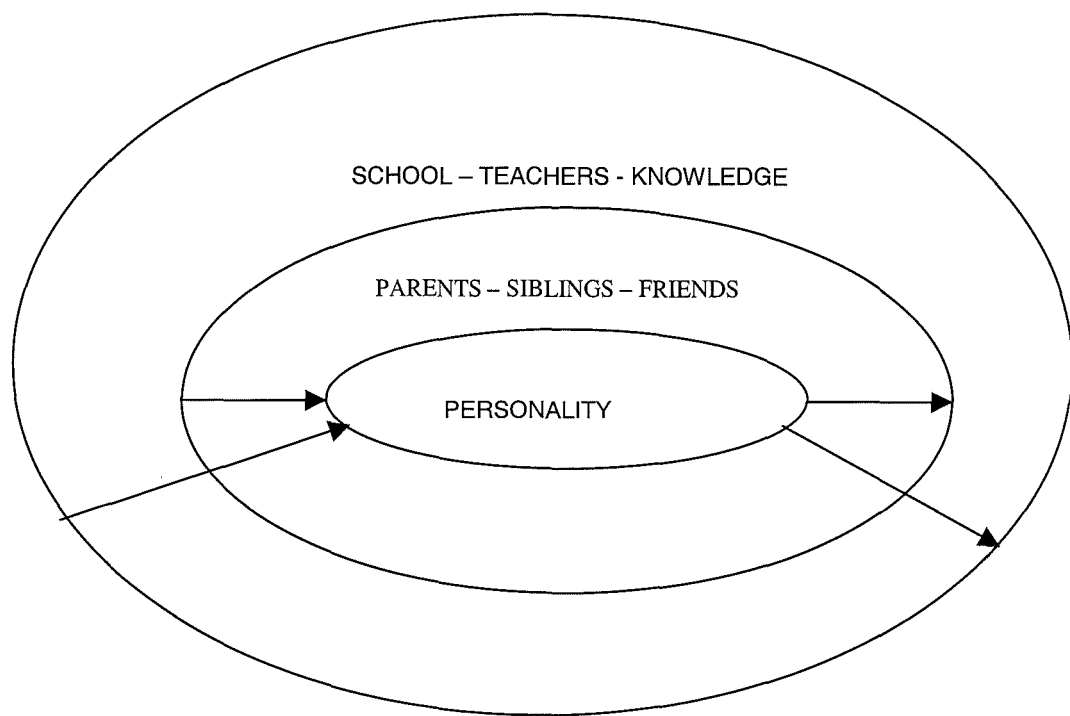
4.11.4.theory of stages

This thesis provides evidence that supports the theory of stages. Almost 20% of the young people who participated in this study changed their smoking behaviour during the academic year. There was a progression from one smoking stage to the next. So, non-smokers experimented with cigarettes, those who had experimented with cigarettes took up the smoking habit and occasional smokers increased the amount of cigarettes that they smoked, becoming thus regular smokers. There are some problems in the definition of the term occasional

smoker and the amount of cigarettes that an occasional smoker consumes per week. Moreover, it may be necessary to develop a theory of stages that can identify the transition from smoking to non-smoking, describing thus the procedure that leads to giving up the smoking habit and the determinants of each stage. This may facilitate the development of an effective anti-smoking prevention programme.

4.12. Levels of influence on adolescent smoking

Adolescent health-related behaviour is best explained and accounted for by reference to the diverse dimensions of influence – intra-personal and inter-personal (McLeory, 1996). The factors that influence adolescent smoking could be divided into three stages according to their strength and proximity to the adolescent. According to the proposed model, the outer layer consists of the school, the teachers and the knowledge that the adolescents have, which represent in a sense the wider social network that the adolescents are exposed to. The middle layer consists of the parents, the siblings and the friends of the adolescents, who form the closer and more immediate social network. The inner layer is the adolescent himself/herself along with all the personality factors that may characterise him/her. This is how the proposed model would appear:



This model is formed in an effort to incorporate all the personal and social factors that influence adolescent smoking into one model and to ‘compensate’ for the weaknesses of the most prevalent theories in the area presented in the previous section. It is based on Bronfenbrenner’s model (1977), who was significant in the development of the **ecological systems theory**. This theory views the child as developing within a complex system of the surrounding environment. He envisions the environment as a series of nested structures that includes but extends beyond home, school and neighbourhood settings, in which children spend their everyday life. Each layer of the environment is viewed as having a powerful impact on children’s development.

According to Bronfenbrenner the environment is not a static force that affects the children in a uniform way. Instead, it is dynamic and ever-changing. Important events modify existing relationships between children and their environments,

producing new conditions that affect development. In addition, the timing of environmental change affects its impact. He refers to the temporal dimension of his model as the **chronosystem**. He emphasises that changes in life events can be imposed externally or that they can arise from within the organism, since children select, modify and create many of their own settings and experiences. How they do so depends on their physical, intellectual and personality characteristics and the environmental opportunities available to them. Therefore, in the ecological systems theory, development is neither controlled by environmental circumstances nor driven by inner dispositions. Instead, children are both products and producers of their environments, both of which form a network of inter-dependent effects.

The level of influence of each of these factors varies from one adolescent to the next according to age, gender and the smoking behaviour of the adolescent in question at the time. The levels of influence may be different for the same adolescent at different stages of his/her life. It is important to note, as shown in the diagram above, that the adolescent is not just a recipient of the external influences. He/she is able to exert some influence on them as well and make a difference.

This model is an attempt to present in a diagram the findings in this study that adolescents are not only influenced by one factor at a time as many studies hypothesise. These factors are not mutually exclusive, since the adolescents are exposed to all of them in their everyday life. Another aim of this model is to emphasise the active role of the adolescent in the formation of his/her own

smoking behaviour, as Bronfenbrenner (1977) himself pointed out with the ecological systems theory. Moreover, it should stressed that these personal and social factors interact between them. Children are initially influenced by their parents, which, in turn, influences their attitudes and therefore choice of friends. Parents, children, friends and teachers are all influenced by the larger culture. Friends are influenced by school policies and norms (potentially) but have their own sub-culture, e.t.c. Although the picture is quite complex, understanding it can offer health educators a range of strategies for intervention, some of which are discussed later on.

Santi, Best, Brown and Cargo (1991) presented a comprehensive view that includes the combined effects of individual, family, peers, school and community factors. They argue that smoking initiation is a function of both personal (peer and family) and more macro (school and community) social environment. The present study includes other factors as well, such as teachers, siblings and knowledge and considers school to be a 'small version of the society and the community at large'.

Scriven and Stevenson (1998) suggest that adolescents represent a difficult target group with their behaviour reflecting interactions between the internal psychological and external social contexts. The complex internal context of cognition, which is connected to psychological development, influences behaviour just as much as the external social environment.

4.13. Suggestions for a prevention/intervention programme

The lack of Health Education in the National Greek Curriculum makes the planning of an effective antismoking prevention/intervention programme imperative. It is widely questioned as to whether such an effort will actually make any difference in smoking prevalence among adolescents. This hesitation derives from the fact that many other countries do run similar programmes and do not allow pupils and staff to smoke on the school premises, but still there are adolescents who experiment with or take up smoking. It can be argued, though, that some kind of prevention/intervention is better than indifference and lack of a formal source of information on the facts about smoking. The role of the school is to educate the pupils and health is a subject that must be taught and dealt with. Moreover, there is an additional opportunity to learn from the deficiencies that other programmes have and to try to make up for them. The aim of this section is to do just that, deriving information mainly from the adolescents themselves and making some suggestions on this basis.

It is unrealistic to assume that all adolescents respond to the same arguments. According to their age they are able to accept and process different kind of information. Arguments such as: ‘smoking is bad for health’ can turn out to be effective with younger adolescents, while older ones need more immediately powerful arguments to keep them from experimenting with smoking or taking up the smoking habit. They are more inquisitive and are mature enough to be able to present equally convincing arguments to support the opposite view – for example: ‘many doctors and athletes smoke. Don’t they care about their health?’

Therefore, it is important to focus on approaching each age group in a different way in order to have the desirable effect. Moreover, we must take into account that each age group probably corresponds to a different stage of smoking acquisition. A prevention programme may be more suitable for younger adolescents who are mainly non-smokers to keep them from experimenting with smoking. An intervention programme would better suit the needs of older adolescents who may have experimented with cigarettes or be occasional/regular smokers already. The desirable outcome in this case is to keep them from increasing the amount of cigarettes that they smoke and if possible to help them give up smoking.

The fact that different age groups have different characteristics is documented by Aggleton, Whitty, Knight, Prayle, Warwick and Rivers (1998). They found that: 'pupils aged 11 years and upwards were more likely to express a sense of voluntarism and the belief that individuals are responsible for their own actions. In contrast to both younger age groups, 15-17 year-olds interviewed had higher levels of awareness of official health messages, especially those related to nutrition and diet, exercise, smoking, alcohol and drug use. Fergusson et al. (1995) stress the importance of preventing young people from making transitions from non-smoking to occasional smoking, since they find that once young people become occasional smokers it is unlikely that they will return to being non-smokers. They also emphasise the importance of targeting interventions at young people during the period from 14 to 16 years, since this is the time at which there is an increased rate of transition to smoking behaviours. There is the need for smoking intervention programmes that begin relatively early in childhood and

extend into adolescence, with these programmes being directed at different stages of the transition to smoking. In early and middle childhood, the aims of an effective programme should be to reduce the likelihood that young people will experiment with or occasionally use cigarettes, but the emphasis of these programmes needs to change in adolescence to address the clear increase in rates of usage amongst those over 14 years old. The optimal smoking prevention programmes are likely to be those that are continued throughout childhood, with the emphasis of these programmes varying in an age-appropriate way. During early and middle childhood the focus of such programmes should be upon educational and other methods that deter children from smoking experimentation, which appears to be the first step on the road to the tobacco habit. However, in adolescence, such educational efforts should be supplemented by programmes that address the effects of peer affiliations and peer influence on rates of transition to occasional or regular smoking.

Boys and girls respond to different arguments. Many prevention/intervention programmes fail because they assume that boys and girls – even from the same age group – respond equally to the same arguments. The analysis of the data shows that the misconceptions that the boys foster are different from those of the girls. The most common misconception amongst the boys is that smoking does not prevent you from being a good athlete and they cite example of known athletes (mainly football and basketball players) who smoke and remain very good athletes and are in good shape. They cannot or choose not to understand that the harm that is caused to their health is gradual and not that evident until they are a bit older. They believe only what they see and what they see is an

externally healthy person. Only if they experience a decrease in their stamina themselves, are they able to understand what really happens. There are some boys who have experimented with cigarettes or are smokers and decide to cut down on cigarettes or to give up smoking because their stamina has decreased and they cannot be good athletes. So, they seem to trust and learn more from their personal experience. It is important to remember that an important parameter that can influence the boys' smoking behaviour is their performance in sports. Donato, Assanelli, Chiesa, Poeta, Tomasoni and Turla (1997) support this view. They conducted a cross-sectional survey among 1462 students in grades 9-13 and found that students' smoking was negatively associated with the regular practice of sports. But it is essential to move away from 'cliches' and to explain what happens in the body, and why and how the stamina decreases. This will make things clear and probably more convincing.

As far as girls are concerned, they believe that smoking can help you lose weight and stay slim and they say that they hear of people who give up smoking and gain weight. Crisp, Sedgwick, Halek, Joughin and Humphrey (1999) said that teenage girls often smoke cigarettes, recognizing that it protects them from the impulse to binge eat with its feared weight-gain consequences. Brooks (1998) found that weight control is a major reason that teenage girls take up smoking, according to a study of nearly of 3000 British and Canadian schoolgirls. Girls who smoked were 30% more likely to be overweight, more prone to overeat and twice as likely to be worried about their body image than non-smokers. Most smokers also wanted to be considerably thinner than they were and were twice as likely as others to induce vomiting after overeating. One in four girls said

smoking made them less hungry and that they used smoking 'instead of eating'. Although many reported that they would be healthier and it would please their parents if they gave up, the fear of eating more and putting on weight prevented them from stopping. Since the body image of adolescent girls is of great importance to them, they may experiment with cigarettes and start smoking in an effort to keep their weight under control. This concept must be addressed in a prevention/intervention programme is aimed at adolescent girls.

Another misconception that both boys and girls have is that there is no drug in cigarettes. They think that nicotine is not considered to be a drug, although many of them believe that cigarettes can be addictive. Maybe this is partly due to the fact that the word 'drug' is associated with something that is illegal and potentially lethal – which, of course, cigarettes are. Cigarettes, though, are legally sold even to minors in Greece and smoking is not punished or considered to be socially unacceptable. Moreover, the notion of addiction may frighten some adolescents, since it implies loss of control and this is not desirable. Actually, there are some adolescents who claim that they are afraid to experiment with smoking because they are afraid that they will become addicted to cigarettes and will not be able to stop. It is useful to explain what nicotine is and if, how and why it can be addictive and considered to be a drug. The purpose of this briefing is not to frighten the adolescents but to help them become more familiar with the terminology and the addictive nature of nicotine, as well as other substances. There are also some adolescents who ask how can people quit smoking and if there are any special places where they can go, like they do with drug addiction. These questions are an indication of how confused and misinformed adolescents

are. It is, thus, essential to provide all the necessary information as soon as possible.

Another parameter that must be taken into consideration is that many adolescents can recognise a statement regarding facts about smoking as true or false, but they are not able to justify their answer. They know that: 'if a pregnant woman smokes, she can harm the baby'. They do not know if a father who smokes can influence the baby as well. They do not know how the baby is harmed and what can happen when it is born. They are aware of the fact that: 'being in the same room with someone who smokes a lot can make you feel sick' and the term 'passive smoker'. They do not know, though, how it can be that the smoke can influence the health of a non-smoker, especially to the extent of causing his/her death. Finally, they know that: 'smoking affects asthma and bronchitis and caused cancer', but they do not know what these medical terms actually mean and how cigarettes can cause or deteriorate them. They ask what is the difference between 'light' and 'heavy' cigarettes and what is the purpose of the filter. This means that the knowledge that adolescents seem to have is sterile, inaccurate and incomplete.

This constitutes a 'warning' that some things must not be taken for granted. It is possible that the health warnings that are written on packets of cigarettes or launched by the Ministry of Health in an attempt to deter people from smoking are not that effective, because they do not provide any kind of information. They just reproduce and repeat some 'clichés' that do not contain all the necessary information. Maybe this is why facts like 'cigarettes yellow teeth and nails and

make the breath and the clothes smell bad' seem to be more successful as preventive factors. They are not only more immediate, but they are also more understandable. The information that is offered to the adolescents must be accurate, explicit and of interest to them. Otherwise, it mainly constitutes a waste of their time, since it will not have the desirable impact on them.

In order to ensure the quantity and the quality of the information that is addressed to adolescents, it is essential to incorporate it into the school curriculum. The knowledge that the school offers can actually be controlled and age/gender appropriate. The adolescents express their own preferences about who should inform them of the facts about smoking. More than 1/3 of the adolescents prefer an expert, who is identified as a psychologist or a doctor who specialises in patients who are suffering from diseases caused by cigarette smoking. A quarter of the adolescents state a preference for a GP, while another quarter prefer a trained teacher (preferably from P.E. or science). Kealey, Peterson, Gaul and Dinh (2000) conducted a longitudinal study on teacher training as a behaviour change process. They concluded that teacher training and explicit teacher motivation components can promote effective implementation of behaviour change curricula in public school classrooms. A non-smoker is the preference of 9% of adolescents and finally, 6% ask for an ex-smoker to share their experiences with them. An ex-user of a substance constitutes a favourite source of information in Drug Education. They seem to have more credibility since they talk out of personal experience and they do not have any apparent motive to lie or to exaggerate, which is a 'concern' that many pupils have. Orme and Starkey (1999) conducted some research with 575 young people via a questionnaire

survey, which sought to obtain their views on what constitutes effective drug education. The majority of pupils (70%) supported that ex-drug users should deliver a drug education programme. This request for people who are either experts or trained or have personal experience indicates that there is truly a need for more accurate and reliable information on the facts about cigarette smoking. This need that the adolescents express must be taken seriously into account during the planning of prevention/intervention programmes.

It is also imperative to closely examine all the personality factors that lead adolescents to experimenting with smoking or taking up the smoking habit. The ideal solution would be to approach each adolescent separately and discuss his/her thoughts, fears and problems and try to find solutions. Since this is practically impossible, the next best thing is to target these factors and address them. Building the self-esteem of an insecure adolescent, satisfying the curiosity of an inquisitive adolescent with the proper guidance and teaching an adolescent how to stand up for his/her belief without feeling embarrassed of being in the minority. Demonstrating to an anxious and stressed adolescent alternative ways of dealing with his/her stress/anger/disappointment; Helping a shy adolescent to socialise with his/her peers so as to stop feeling lonely; Being supportive and not critical.

A prevention/intervention programme that addresses all these personality issues is bound to be more successful than a programme that aims at creating fear and offering sterile knowledge or working on the principle that young people are passive and subject to peer pressure. And this is because this programmes takes

into account that the adolescent is a human being with needs and the power to make decisions, not a passive recipient of external input. Scriven and Stevenson (1998) argue that for prolonged behavioural change, the impetus and motivation to change must come from the individual rather than from external influences. It is important to enable adolescents to consider and understand their own motivations, belief systems and attitudes. It is desirable to promote the development of self-reflective and self-aware individuals able to make fully reasoned decisions.

Leventhal and Keesham (1993) propose that: 'healthy alternatives, which are incompatible or in direct conflict with smoking behaviour should be created and promoted. Such alternatives might include sporting activities or the development of an awareness of passive smoking and the individual's right to breathe clean air. Providing adolescents with an alternative that offers a reward in the same way as smoking is considered better practice than the teaching of refusal skills based on assumptions about motivation to use them. Recognising the adolescent as a self-regulator of his or her own behaviour and social world is a necessary pre-requisite to designing appropriate smoking education programmes. In addition, appreciating adolescents' needs and goals and understanding their motivations and routes to attaining these goals is a matter of absolute necessity'.

The participation of parents in a school based prevention/intervention programme is ideal, since it is shown that some parents do have the ability to reach out to their adolescent children and offer them guidance and support. It is also essential to set realistic goals and not to expect to make a difference

immediately, especially since Greece is a country where cigarette smoking is a commonplace.

4.14. Limitations of the present study / suggestions for further research

The study is conducted in Greece, where smoking is allowed on the school premises and considered to be socially acceptable. So, it is possible that the conclusions drawn on the level and kind of influence that these factors exert are limited to the Greek setting. Taking into consideration, though, that the amount of adolescent smokers in other countries (e.g. U.K, USA) and their mentality are approximately the same, it is logical to assume that the underlying factors are not that different. It would be useful to test this multi-factorial theory in other countries as well, to check its validity and reliability and whether it can be generalised to other settings. It is of interest to work with a model that does not concentrate just on one influential factor - like most studies conducted so far – and that emphasises the active role of the adolescent in the formation of his/her smoking behaviour.

Another limitation of the present study is that the sample consists of young people who attend school. The young people who do not go to school may exhibit different smoking behaviour and may also respond differently to the different personal and social factors that influence adolescent smoking. So, it may not be appropriate to generalize the findings to all the young people, since school and teachers do not have an impact on them and they probably have alternative sources of information. An investigation of this population would

prove useful also in testing the proposed model of the layers of influential factors on adolescent smoking. It should be pointed out, though, that the percentage of 12-13 and 15-16 year-olds who do not attend school is very small (9%) – according to data from the Ministry of Education (1998-1999). Moreover, it should be pointed out that this study is carried out in Athens, the capital of Greece. This could mean that the findings may not be easily generalized to the adolescents who live in the province, since the social norms may be slightly different.

Due to restrictions of time and means, the data collection is based on self-report questionnaires and short semi-structured interviews. There are many researchers who express reservations on the validity of self-report questionnaires. They claim that the respondent may lie or omit the truth in an effort to provide socially acceptable answers. This is why it is customary to use means such as measures of nicotine content in the participant's saliva to validate his/her claims. There are some studies that report on the validity of self-reports and claim that there is almost no discrepancy between the findings of the self-reports and the measures of nicotine in the saliva. Moreover, it must be stressed that due to the number of cigarettes that adolescents smoke it is difficult to know whether they smoke occasionally or regularly, so the results must again be based on their own testimony (Murray et al., 1987). In an effort to ensure the participants' honest response to the questions, the self-reports are anonymous and the adolescents are asked to place them in an envelope before they hand them back to the researcher. The interviews are also partly used as a means of exploring the reliability of the self-reports.

There is also a concern that the respondent may give an answer that corresponds to what he/she thinks should happen and not to what really happens. Morgan et al. (1991) argue that the perception of other people's attitudes is more important than their actual attitudes in predicting the participants' behaviour. This notion is supported also by Davies (1992), who claims that the belief that the substance users are addicted is a more important predictor of their behaviour than whether they are actually physiologically addicted or not. This suggests that beliefs constitute an essential parameter of behaviour. Especially in the case of friends' attitudes, it is practically impossible to measure the attitudes of all the friends that each participant has, since not all of them attend the same school or belong to the same age group. So, it is imperative to accept the value of the participant's belief, even if there is a slight chance that it may be incorrect.

The interviews, due to time restrictions are quite short – they last approximately 10 minutes – and the use of a tape recorder is not allowed in order to ensure the participants' anonymity. Future research could expand on the semi-structured interviews employed in the present study and to gain more in-depth information that can be analysed with the help of a qualitative statistical package.

It should be noted that young people over the age of 16, who become adults and have the opportunity to spend more time away from home and school, may move to a final stage in the development of cigarette smoking – that of becoming an addicted daily smoker. This transition is not explored in this study, since the proportion of adolescents who smoke daily before the age of 16 years is too

small for useful analysis, but it could be addressed in future studies with older participants. This point is stressed also by Fergusson et al. (1995).

The next step would be the planning a prevention/intervention programme, which is based on the findings and the suggestions of this study. The design and implementation of an anti-smoking programme that incorporates all the information that is presented in this thesis will enable the testing of the effectiveness of the suggestions that are made. This will also provide an opportunity to adopt the necessary measures and to make all the essential changes, so as to achieve the planning of an effective prevention/intervention anti-smoking programme.

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APPENDIX 1**CONFIDENTIAL**

I want to discover more about what young people think about smoking. This research is conducted in schools in Athens in order to gather some data. THIS REPORT WILL NOT BE SEEN BY ANYONE AFTER ITS COMPLETION. I appreciate your help very much. The only way I can get a complete picture of the reality in schools is to directly address the people who know.

- 1) Age _____
- 2) Date of Birth _____
- 3) Sex a) male b) female
- 4) School _____
- 5) Class _____

Now please circle the answer/statement that you consider to be the most appropriate one.

- 6) Do you smoke? If yes, how often? (If you circle (a) or (b) go directly to question 8)
 - a) I have never smoked
 - b) I tried smoking once
 - c) I smoke occasionally (less than eight cigarettes a week)
 - d) I smoke regularly (more than eight cigarettes a week)
- 7) Are your parents aware of the fact that you smoke?
 - a) Yes
 - b) No

8) How do you think your parents feel / would feel about your smoking?

- a) they would stop me any way they could
- b) they would try to persuade me not to smoke
- c) they wouldn't do anything
- d) they would encourage me to smoke

9) Do either of your parents smoke?

- a) Yes
- b) No

10) Do your siblings smoke?

- a) Yes
- b) No
- c) I have no siblings

11) How many of your friends smoke?

- a) all my friends smoke
- b) most of my friends smoke
- c) a few of my friends smoke
- d) none of my friends smokes

12) How do you think your friends feel / would feel about your smoking?

- a) they would stop me any way they could
- b) they would try to persuade me not to smoke
- c) they wouldn't do anything
- d) they would encourage me to smoke

13) How do you think your teachers feel / would feel about your smoking?

- a) they would stop me any way they could
- b) they would try to persuade me not to smoke
- c) they wouldn't do anything
- d) they would encourage me to smoke

14) How do you feel when you see your teachers smoking?

- a) It bothers me
- b) I would rather they didn't smoke
- c) I do not mind
- d) It's their business
- e) It does not bother me
- f) I approve of it

15) Do you believe that teachers should be allowed to smoke on the school premises?

- a) Yes
- b) No
- c) I am not sure

16) Do you believe that pupils should be allowed to smoke on the school premises?

- a) Yes
- b) No
- c) I am not sure

17) How well informed are you on the facts regarding smoking?

- a) Very well informed
- b) Adequately informed
- c) Not very well informed

18) Where did you expect to get or where did you actually get this information from?

- a) My parents
- b) My friends
- c) The Mass Media
- d) The school
- e) Other sources

19) Do you believe that there is any chance you might be smoking by the end of the academic year?

- a) Yes
- b) No
- c) I am not sure

KNOWLEDGE REGARDING THE FACTS ABOUT SMOKING / CIGARETTES

Please tick whether each one of the following statements is **True** or **False**.

- | | | |
|--|------|-------|
| 1) There are no drugs in cigarettes | True | False |
| 2) Being in the same room with someone who smokes a lot can make you feel sick | True | False |
| 3) If a pregnant woman smokes, she can harm the baby | True | False |
| 4) Smoking affects asthma and bronchitis | True | False |
| 5) Smoking does not cause cancer | True | False |
| 6) People who smoke are not good at sports | True | False |
| 7) Smoking yellows teeth and nails | True | False |
| 8) Smoking helps you lose weight | True | False |
| 9) Smoking makes breath and clothes smell bad | True | False |
| 10) Cigarettes are not addictive | True | False |

Please make sure that you have left no questions unanswered.

Thank you very much for your participation.

Please put the completed questionnaire in the envelope provided.

APPENDIX 2***OUTLINE OF THE PUPILS' INTERVIEW AT PHASE ONE***

- Age _____
- Date of Birth _____
- Sex a) male b) female
- School _____
- Class _____

- Do you smoke? If yes, how often?

- a) I have never smoked
- b) I tried smoking once
- c) I smoke occasionally (less than eight cigarettes a week)
- d) I smoke regularly (more than eight cigarettes a week)

- Are your parents aware of the fact that you smoke?

- a) Yes b) No

- Under which circumstances were you offered cigarettes?**- What made you decline or accept the offer to try a cigarette / take up smoking?****- What do you believe that cigarettes / smoking offer?**

- How do you feel when you see your teachers smoking?

- a) It bothers me
- b) I would rather they didn't smoke
- c) I do not mind
- d) It's their business
- e) It does not bother me
- f) I approve of it

WHY?

- Do you believe that teachers should be allowed to smoke on the school premises?

- a) Yes
- b) No
- c) I am not sure

WHY?

- Do you believe that pupils should be allowed to smoke on the school premises?

- a) Yes
- b) No
- c) I am not sure

WHY?

- Where did you expect to get or where did you actually get this information from?

- a) My parents
- b) My friends
- c) The Mass Media
- d) The school
- e) Other sources

- Do you believe that there is any chance you might be smoking by the end of the academic year?

- a) Yes
- b) No
- c) I am not sure

APPENDIX 3

OUTLINE OF THE TEACHERS' INTERVIEW

- School
- Do you smoke?
- Do you / would you smoke on the school premises?
- In front of the pupils?
- Do you believe that by smoking in the presence of pupils you set a bad example and why?
- Do you believe that teachers should be allowed to smoke on the school premises and why?
- Do you believe that pupils should be allowed to smoke on the school premises and why?
- How do you think that you should deal with a pupil who is smoking on the school premises and why?
- Do you inform the pupils of the facts about smoking?
- If you do, is it your own initiative or is there a provision in the school curriculum?
- Do you believe that pupils know enough about cigarettes and smoking?
- Who should teach a health education course, should there be one?

8) How do you think that your **friends** would react if you smoked?

- a) They would avoid hanging out with me
- b) They would advise me not to smoke
- c) They would not interfere with my decision
- d) They would offer me cigarettes and join me
- e) Other

9) How do you think that your **teachers and headmaster** would react if they saw a pupil smoking?

- a) They would tell him/her not to smoke again
- b) They would suspend him/her from school
- c) They would notify his/her parents
- d) They would tell him/her to go to a special place to smoke
- e) They wouldn't do anything
- f) Other

10) Do you feel that you have learned more facts about smoking during this academic year?

a) Yes

b) No

11) If yes, where did you get that information?

- a) My parents
- b) My friends
- c) The Mass Media
- d) School
- e) Other

12) Is there anything you want to know about smoking? If yes, what?

.....

13) Which issues do you think that an anti-smoking campaign should stress and why?

.....

14) If there was Health Education in the school curriculum, who do you think should teach it?

.....

15) Do you think that smoking is a socially acceptable behaviour?

a) Yes

b) No

Why?

.....

16) Do you see yourself smoking in the future?

a) Yes

b) No

c) I am not sure

Under which circumstances?

.....
.....
.....
.....
.....

